2-12-12 \*93894\* Mork Order ID 93894 Page 1 November-27-12 2:42:16 PM Item ID: D350-636-015 Accept \*N900040100\* Setup Start Revision ID: \*NS2\* Skidtube STD w/ Training Wearplates, LH Item Name: Start Date: 11/27/12 Start Oty: 1.00 **Cust Item ID:** Required Date: 12/14/12 **Reg'd Oty:** 1.00 **Customer:** Reference: Start Run Process Plan: MLJ Date: 12-11-29 Tooling: Date: Approvals: Stop Date: SPC (Y/N): QC: Date: Reject Reject Sequence (ID/// Work Center, ID Operation Set Up/ Tool ID Tool # Plan Accept Insp. Number Stamp Code **Qty** Otv Description **Run Hours** Draw Nbr **Revision Nbr** C Α IIN+D350-636 DOCUMENT CONTROL 0.00 121218 by blue file and type labels per PPP D350-636-015 CHG 004 38011

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	<b>⊢</b> `	ection Stri	•	ibe		Cut Too Short	_	Misread	d		Power Loss/	Surge	Other
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	<del></del>	ue Waves		rusion		Drawing	$\vdash$		Calibration				
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	Wav	e/Twist in	Tube			Folio		Outside	Dimensions				

DQA: Date:

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Page 2

Insp.

Stamp

November-27-12 2:42:16 PM Item ID: D350-636-015 Accept \*N900040100\* Setup Start **Revision ID:** Skidtube STD w/ Training Wearplates, LH Item Name: 11/27/12 Start Qty: 1.00 **Start Date: Cust Item ID:** Required Date: 12/14/12 **Reg'd Oty:** 1.00 **Customer:** Reference: Run Start Process Plan: Date: Tooling: Date: Approvals: Stop Date: \_\_\_\_\_ QC: SPC (Y/N): Date: Sequence ID/ **Operation** Tool ID Tool # Plan Set Up/ Accept Reject Reject **Work Center ID Description** Code Qty Qty Number **Run Hours** 110 0.00 Skidtubes \*110\* 0.00 Skidtubes Memo 1- Pick D2600-3 Bent Skidtubes 2- Deburr FWD and AFT ends, remove bending marks. Scribe batch# inside AFT end per dwg D4168 3- Drill pilot holes for blade fitting bolt holes using DT8983. Open to 0.500", deburr, section H-H 4- Locate DT8330 off of blade fitting bolt holes and drill pilot holes for blade fitting, section H-H 5- Drill fwd step holes using DT9616. Ensure proper positioning. All holes as per dwg D4168, detail A 6- Drill pilot holes as per Dwg D4168 sheet 4 (D4168-1 details). Drill using drill 2-12-7 Jig DT8150 & DT8863A for first side only DT8863B for second side (detail B) 7- Clecko DT8863B on second side of tube and drill pilot holes for detail B. \*\*\*SECOND SIDE\*\*\* 8- Drill most FWD wearplate hole using DT9678 locating off of 66.54" hole. 9-Open up holes of Detail A to 0.297" (total of 2 holes per side) and .201" (total of 1 hole per side) open holes of detail D section H-H to 0.500" as per dwg D4168

10-Weld D2744 Cap as per Dwg D4168 and QSI 004. Fill grooves in bend left

from bending as per OSI 004

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Bending Centre Not Concentric to O/S Cracks Crushed/Crimped. Cuffs Heat Treat Inspection Strip in Tube Ripples in Bend					Bend BOM/Route Broken/Damaged Burrs Contamination Countersink Cut Too Short Drill Holes	Grain  Hardware  Inspection Incomplete  Instructions Incomplete/Unclear  Maintenance  Mislabeled  Misread  Offset			Ovalized Over/Under Part Incorre Part Lost/M Part Moved Positioned V	ct issing Wrong	Pressure/Forced Temperature/Cure Weld Wrong Stock Pulled Other	
}		Vaves in E Sequence		n  -	Drawing Finish	-	4	Calibration Sequence				
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Outside Dimensions

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Wave/Twist in Tube

Folio

Order ID 93894 \*93894\* Page 3 November-27-12 2:42:16 PM Item ID: D350-636-015 Accept \*N900040100\* Setup Start Revision ID: Item Names Skidtube STD w/ Training Wearplates, LH Start Qty: 1.00 **Start Date:** 11/27/12 **Cust Item ID:** Required Date: 12/14/12 Req'd Qty: 1.00 **Customer:** Reference: Run Process Plan: Date: Tooling: Approvals: Date: Stop QC: Date: SPC (Y/N): Date: Sequence ID/ Operation Set Up/ Tool ID Tool # Plan Reject Accept Reject Insp. Work Center ID Description Run Hours Number Stamp Code Qty Qty A/R Aluminum Rod batch: M122357 BE12-12-07 11-Grind welds flush as per Dwg D4168 QC10- Inspect visual per QSI004- ground welds Memo uality Control 130 QC5- Inspect part completeness to step on W/O 0.00 Dusto Memo Quality Control

					DQA:	Date:	
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		Cracks		Broken/Damaged		Inspection Incomplete	Part Incorrect	Weld
		Crushed/Crimped		Burrs		Instructions Incomplete/Unclear	Part Lost/Missing	Wrong Stock Pulled
		Cuffs		Contamination		Maintenance	Part Moved	
		Heat Treat		Countersink	L	Mislabeled	Positioned Wrong	_
		Inspection Strip in Tube		Cut Too Short		Misread	Power Loss/Surge	Other
[		Ripples in Bend		Drill Holes		Offset		 
Į.		Torque Waves in Extrusion		Drawing		Out of Calibration		
		Turning Sequence		Finish		Out of Sequence		
Ī		Wave/Twist in Tube	Г	Folio		Outside Dimensions		4

\*93894\*

Page 4

Item ID: Revision ID:	D350-636-01	15		Accept	*N900	<b>040</b>	100	)*	Setup	Start	*N	S1*
Item Name:	Skidtube STD	w/ Training Wearplates	, LH							Stop	*N:	S2*
Start Date:	11/27/12	Start Qty: 1.00	*1*		Cust Item I	D:						
Required Date:	12/14/12	<b>Req'd Qty:</b> 1.00	*1*		<b>Customer:</b>							
Reference:			•									
Approvals:	Process Pla	n:	Date:	Tooling:	Da	ate:	· <b>-</b>		Run	Start	*N	R1*
•	QC:		Date:	_ SPC (Y/N):	Da	ate:				Stop	*N	R2*
Sequence ID/ Work Center II	)	Operation Description		Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accep Qty	t Re		Reject Number	Insp. Stamp
140		Chemical Conversion Co	at per QS1005 4.1	0.00								
*140* HandFinish		Memo		0.00				- IhH		<b>√</b>	U n	01/51/
Hand Finishing												
150		QC3- Inspect Part Finish		0.00								
*150*								SA	O	12.	-121	n
QC		Memo		0.00								
Quality Control												

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										QA Closed:	Date:	
Work Orde	or.				DISPOSITION				AGAINST DE	PARTMENT	/PROCESS	
Part N	lo				Rework Scrap Use-as-is Work Order Update		Therm	Machining noforming	Crosstube Small Fab Finishing Composite	<b>:</b>	Water Jet d. Eng. Coor. re/Packaging Supplier	Engineering Quality Other
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[	Cracks				Broken/Damaged		Inspecti	on Incomplete		Part Incorre	ct	Weld
	Crushe	d/Crimped			Burrs	П	Instruct	ions Incomplete/Unc	clear	Part Lost/Mi	issing	Wrong Stock Pulled
	Cuffs				Contamination	$\Box$	Mainte	nance		Part Moved		
	Heat Tr	eat			Countersink	П	Mislabe	led		Positioned V	Vrong	•
1	Inspect	ion Strip in	Tube		Cut Too Short		Misread	I		Power Loss/	Surge	Other
Ī	Ripples	in Bend			Drill Holes	П	Offset			_	<del></del>	

Out of Calibration

Out of Sequence

Outside Dimensions

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Turning Sequence Wave/Twist in Tube

Torque Waves in Extrusion

Drawing

Finish

& OSI004

(welding instructions on sheet 8)
A/R Aluminum Rod batch: M/2

9- At section AJ-AJ drill out x-bolt spacer to 0.404"

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	- Oin	r
NCR:	Yes	No

# **WORK ORDER NON-CONFORMANCE / UPDATE**

$ \bigcirc $	DQA: Date	: 12/22/21

NCN.	25) / NO			•	WORK ORDER NON-C	ONFOR	IVIANCE / OF	DAIL	QA Closed:	Date:	((		
Work Order	r: 9	380	34		DISPOSITION			AGAINST DE	PARTMENT	/PROCESS			
Part No	o. <u>D35</u>			015	Rework 🗲 Scrap		Skid-tube Machining	Crosstube Small Fab	4	Water Jet d. Eng. Coor.	Engineering Quality		
NCR No	o. <u>12</u>	21	<u>Z</u> U		Use-as-is 🗞 Work Order Update	Ther	moforming Large Fab	Finishing Composite	Rec/Sto	re/Packaging Supplier	Other		
Root			:	Descri	ption of work order update	Initial	Ac	ction	Sign &				
Cause	Date	Step	Qty	(	or Non-conformance	Chief Eng	g Desc	cription	Date	Verification	QC Inspector		
Ooc/Data  quip/Tooling Operator  Material Setup Other Process Supplier  Fraining	160,8 x1 +24; SDAC AU 0 12 met			trying SDACCA AU are in web	to Place the x-bolt to Place the x-bolt in the took in the took in were brilled too 5 mall.  nould be Q 0.750".		Remove moth has with bit. touch up w usper as 20		86 12-12-11 8E 12-12-11	12/12/12	15/15/11		
Jnapproved		<u> </u>	1	<u> </u>		AULT CAT	 EGORY		<u> </u>		1		
Landin	g Gear		-		General					· · · ·	, , , , , , , , , , , , , , , , , , ,		
	Bending Centre Not Concentric to O/S Cracks Crushed/Crimped Cuffs Heat Treat Inspection Strip in Tube Ripples in Bend Torque Waves in Extrusion				Bend BOM/Route Broken/Damaged Burrs Contamination Countersink Cut Too Short Drill Holes Drawing	Hardw Inspec Instruct Maint Mislat Misre Offset Out of	Grain Hardware Inspection Incomplete Instructions Incomplete/Unclear Maintenance Mislabeled Misread Offset Out of Calibration		94	Wrong /Surge			
Turning Sequence				<u> </u>	Finish	Out of	f Sequence		WEED E	Weed Better Checking trosling			

Outside Dimensions

Wave/Twist in Tube

Work Orde				*938	394*							Page	6
Item ID: Revision ID:	D350-636-0	15		Accept	*N900	<b>040</b>	100	)*	Setup		*N:	S1*	=
Item Name:	Skidtube STE	w/ Training Wearplates	LH							Stop	*N:	S2*	
Start Date: 11/27/12 Start Qty: 1.00 Required Date: 12/14/12 Req'd Qty: 1.00 Reference:			*1* *1*		Cust Item II Customer:	D:							
Reference:  Approvals:	Process Pla	an:	Date:	Tooling:	Da	te:			Run	Start Stop	*N	R1*	
	QC:		Date:	_ SPC (Y/N):	Da	te:				Бюр	*N	R2*	
Sequence ID/ Work Center II	)	Operation Description		Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accep Qty	t Rej Qty		Reject Number	Insp. Stamp	
		11-Spot face dwg D4168,	section AL-AL ection CG-CG	ection (total of 4 places pe	er side) as per $=$ $=$ $=$ $=$ $=$ $=$ $=$ $=$ $=$ $=$	(*)  /	12-13	۲-۱)					
			FOR DELUXE SKIDTU JBE *********	BE IF APPLICABLE DRI	LL TOW RING	,				-			
70 QC10- Inspect visual <b>*170*</b> QC Memo			QSI004- ground welds	0.00 PAS	Mizhz								-

Quality Control

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Work Ord	er:						DISPOSITION				AGAINST DE	PARTMENT	PROCESS	
Part I	٠ ، No						Rework Scrap Use-as-is Work Order Update		Therm	Skid-tube	Crosstube Small Fab Finishing Composite	-4	Water Jet d. Eng. Coor. re/Packaging Supplier	Engineering Quality Other
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Cause		Date	Step	Qty_		C	r Non-conformance	Ch	ief Eng	Descri	iption	Date	Verification	QC Inspector
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							F.	AUL	T CATE	GORY				
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	Bending Centre Not Concentric to O/S Cracks Crushed/Crimped Cuffs Heat Treat Inspection Strip in Tube Ripples in Bend				BOM/Route Broken/Damaged Burrs Contamination Countersink Cut Too Short			re on Incomplete ions Incomplete/U nance Ied	Inclear	Over/Under Part Incorred Part Lost/Mi Part Moved Positioned V Power Loss/	ct sissing Vrong	Temperature/Cure Weld Wrong Stock Pulled Other		
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Outside Dimensions

Wave/Twist in Tube

Folio

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Work Ord	er ID 93	3894		*938	Q//*							Page 7
Vovember-27-1	2 2:42:16 P	M		7. 10 1	··/ <del></del>							
tem ID: Revision ID:	D350-636-0	015		Accept	*N900	0040	100	)*	Setup		*N:	S1*
item Name:	Skidtube STI	D w/ Training Wearplates	, LH							Stop	*N!	S2*
Start Date:	11/27/12	Start Qty: 1.00	*1*		Cust Item	ID:						
Required Date	: 12/14/12	<b>Req'd Qty:</b> 1.00	*1*		Customer:							
Reference:			•									
Approvals:	Process Pl	lan:	Date:	Tooling:	D	)ate:		]	Run	Start	*NI	R1*
	QC:		Date:	<b>SPC (Y/N):</b>	D	ate:				Stop	*N!	R2*
Sequence ID/ Work Center I	D	Operation Description		Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reje Qty		Reject Number	Insp. Stamp
180		QC5- Inspect part compl	eteness to step on W/O	2AQ , 00.0								
*120* <sup>QC</sup>		Memo		0.00	elizliz							
Quality Control		***VERIFY	C'BOARD IS GOOD***									
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190		Pressure Wash per QS100	05 4.3	0.00							_	
*190* HandFinish		Memo		0.00						RG.	127	12.12
Hand Finishing			ube as per QSI 005 section	1 4.1.2.1 do not acid etch.								
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200		White Gloss(Ref:4.3.5.1)	per QSI005 4.3-Alum	0.00				/\/				111/
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Powdercoat  Powder Coating		Memo		0.00							l	a/H/6
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		Cracks				Broken/Damaged		Inspecti	ion Incomplete		Part Inco	rrect			Weld
		Crushed/	Crimped			Burrs		Instruct	ions Incomplete/U	Jnclear	Part Lost	/Miss	sing		Wrong Stock Pulled
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		Heat Trea	at			Countersink		Mislabe	eled		Position	ed Wr	rong		•
		Inspectio	n Strip in	Tube		Cut Too Short		Misread	d		Power Lo	oss/Su	urge	L	Other
		Ripples ir	Bend			Drill Holes		Offset		_	_				

Out of Calibration

Out of Sequence

Outside Dimensions

Turning Sequence

Wave/Twist in Tube

Torque Waves in Extrusion

Drawing

Finish

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Work Orde November-27-12				*938	394*							Page
Item ID: Revision ID: Item Name:	D350-636-0 Skidtube STI	D w/ Training Wearplates,	LH	Accept	*N900	<b>040</b>	100	)*	Setup	Start Stop	1 71	S1* S2*
Required Date: 1 Reference:	11/27/12 12/14/12	Start Qty: 1.00 Req'd Qty: 1.00	*1* *1*		Cust Item I Customer:	D:						
Approvals:		an:	Date:	Tooling:  SPC (Y/N):		nte:			Run	Start Stop		R1* R2*
Sequence ID/ Work Center II 210	)	Operation Description QC3- Inspect Part Finish		Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Rej Qty		Reject Number	Insp. Stamp
*210 *210*		Memo		0.00				146	<u>(</u>	_{	Il ul	alu_
Quality Control		Inspect for for	eign object per QSI 024	1								

220

\*220\* HandFinish Hand Finishing

HandFinishing

Memo

0.00

0.00

1- Install inserts as per Dwg D4168

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												DQA:	Date:	
NCR:	Yes	/ No					WORK ORDER NON-	CO	NFORI	MANCE / UPE	DATE			
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Vork Ord	er:						DISPOSITION				AGAINST DE	PARTMENT	PROCESS	
Part NCR							Rework Scrap Use-as-is Work Order Update		Therm	Skid-tube  Machining  noforming  Large Fab	Crosstube Small Fab Finishing Composite	4	Water Jet d. Eng. Coor. e/Packaging Supplier	Engineering Quality Other
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20114		Bending				Γ	Bend		Grain			Ovalized		Pressure/Forced
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		Cuffs	·				Contamination		Mainte			Part Moved	-	_
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		Inspection	n Strip in	Tube			Cut Too Short		Misread	ł		Power Loss/	Surge	Other
		Ripples in	Bend				Drill Holes		Offset					
		Torque W	aves in E	Extrusio	n		Drawing		Out of 0	Calibration				
		Turning S	equence				Finish	Г	Out of	Sequence				

Outside Dimensions

Wave/Twist in Tube

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

Work Orde				*93	894*							Page 9	
tem ID: Revision ID:	D350-636-0			Accept	*N900	<u>)</u> 040	100	)*	Setup	Start Stop	171.	S1*	:
tem Name:	Skidtube STD	w/ Training Wearplates	, LH							Stop	*N3	<b>S</b> 2*	
start Date:	11/27/12	Start Qty: 1.00	*1*		Cust Item	ID:							
Required Date:	12/14/12	<b>Req'd Qty:</b> 1.00	*1*		Customer:	:							
Reference:													
Approvals:	Process Pla	an:	Date:	Tooling:	D	Date:			Run	Start	71	R1*	
	QC:		Date:	_ SPC (Y/N):	D	Date:	<del> </del>			Stop	*NI	R2*	
Sequence ID/ Work Center II	D	Operation Description		Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Rej Qty		Reject Number	Insp. Stamp	
30		HandFinishing		0.00						1	H	(	
*230* HandFinish		-		0.00				1 W	H	<b>4</b>	$-\mathcal{M}$	uliz 1	Л
land Finishing		Memo	Foreign Objects	0.00						,			
		•	de of tube with "LPS-3"	batch: UIA									
		per dwg D41 SIKA FLEX	241	arshoes and ground han	dling hardware as								
		4-assemble of A/R 55-o'rin	o'ring to plug as per dwg ! ng lube batch:_ <u>从八</u>	D3492 and apply o'ring	lube								
		5-Coat all ex	posed fasteners with "LP	'S Procyon" batch:	M1(4596								
*240*		QC5- Inspect part comple	eteness to step on W/O	•	5			1					
QC Quality Control		Memo		0.00	D 14								

Quality Control

											DQA:	Date:	
NCR:	Yes	/ No				WORK ORDER NON-C	CON	IFORI	MANCE / UP	DATE	·		
											QA Closed:	Date:	
Work Ord	er:					DISPOSITION				AGAINST DE	PARTMENT	/PROCESS	
Part 1	No.				·	Rework Scrap Use-as-is Work Order Update		Thern	Skid-tube  Machining  noforming  Large Fab	Crosstube Small Fab Finishing Composite		Water Jet d. Eng. Coor. re/Packaging Supplier	Engineering  Quality  Other
Root					Descri	ption of work order update	lı	nitial	- Act	tion	Sign &		
Cause		Date	Step	Qty	C	or Non-conformance	Chi	ief Eng	Desci	ription	Date	Verification	QC Inspector
Doc/Data													
Equip/Tooling													
Operator	П												
Material													
Setup									ų.				
Other			1										
Process			į										
Supplier													
Training													·
Unapproved													
						F	AUL	T CATE	GORY		***		
Landi	ng (	Gear				General					-		,
		Bending				Bend		Grain			Ovalized		Pressure/Forced
		Centre No	ot Concer	ntric to	o/s	BOM/Route		Hardwa	ire		Over/Under	tolerance	Temperature/Cure

Inspection Incomplete

Maintenance

Out of Calibration

Out of Sequence

Outside Dimensions

Mislabeled

Misread

Offset

Instructions Incomplete/Unclear

Weld

Other

Wrong Stock Pulled

Part Incorrect

Part Moved

Part Lost/Missing

Positioned Wrong

Power Loss/Surge

Broken/Damaged

Contamination

Countersink

Cut Too Short

Drill Holes

Drawing

Finish

Folio

Burrs

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Turning Sequence

Wave/Twist in Tube

Ripples in Bend

Cracks

Cuffs

Heat Treat

Crushed/Crimped.

Inspection Strip in Tube

Torque Waves in Extrusion

Work Orde November-27-12				*938	94	*						Page 1	0
Item ID: Revision ID:	D350-636-0	015		Accept	*N	900	040	100	)* 5	Setup Sta	rt *N	S1*	<del></del>
Item Name:	Skidtube STI	O w/ Training Wearplates	s, LH							Sto	p <b>*</b>	S2*	
Start Date:	11/27/12	Start Qty: 1.00	*1*		C	ıst Item I	D.					. 17	
Required Date:		Req'd Qty: 1.00	*1*			ustomer:							
Reference:		•	•										
Approvals:	Process Pl	an:	Date:	Tooling:		Da	ate:	_	I	Run Sta	171	R1*	
-						Da	ate:			Sto	<sup>р</sup> *N	R2*	
Sequence ID/ Work Center I	D	Operation Description		Set Up/ Run Hours	<u> </u>	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp	20 20
250		Pick Kit		0.00									•
<u>*250*</u>									1			12/1:	418 gt
Packaging		Memo		0.00								, ,, ,,	V. 0
Packaging			4A 2A										
		004 1009/ 1	6	0.00	`								
260		QC4- 100% Inspect kits	for completeness	0.00					1				
*260*		Memo		0.00 DUK	J								_
Quality Control			re antiseize is on AN8C21	A bolts*****									
													ONS!
270				0.00	.12			1	$\mathcal{T}$		1	1	20
*270*		Packaging		fa	673			(	-(1)	X	12/12	118	20
Packaging		Memo		0.00						-	1-10	,	_
Packaging		Identify and Location:	pack for shipping as per	PPPD350-636-015									
		PPP rev											

											DQA:	Date	·
NCR:	Yes /	No				WORK ORDER NON-C	CON	<b>VFORM</b>	MANCE / UPI	DATE			
											QA Closed:	Date	
Work Ord	or·					DISPOSITION				AGAINST DE	PARTMENT	/PROCESS	
WOIK OIG						Rework	1		Skid-tube	Crosstube	7	Water Jet	Engineering
Part I	No.					Scrap	1		Machining	Small Fab	Pro	nd. Eng. Coor.	Quality
,						Use-as-is	1		noforming	Finishing	-1	re/Packaging	Other
NCR I	No.					Work Order Update	1		Large Fab	Composite	<b>†</b>	Supplier	1   1
							1				<b>-</b>		
Root					Descri	ption of work order update	11	nitial	Act	tion	Sign &		
Cause		Date	Step	Qty	(	or Non-conformance	Ch	ief Eng	Desci	ription	Date	Verification	QC Inspector
Doc/Data								ä					
Equip/Tooling	Ш						l						
Operator	Ш						'						
Material	Ш												
Setup													
Other	Ш												
Process	Ш												
Supplier	Ш												
Training .													
Unapproved	Ш_										<u> </u>		
				·····-	·	· · · · · · · · · · · · · · · · · · ·	AUL	T CATE	GORY				
Landi	ng Gea				_	General		٠ .			٦	Г	٠,
	<b>—</b>	nding				Bend	-	Grain		<u> </u>	Ovalized	<b>-</b>	Pressure/Forced
	⊢—		t Concer	ntric to	U/S	BOM/Route	$\vdash$	Hardwa		<u> </u>	Over/Unde	<u> </u>	Temperature/Cure
	—	icks			<u> </u>	Broken/Damaged	_	· ·	ion Incomplete		Part Incorre	<u> </u>	Weld
	<del></del>		crimped.		<u> </u>	Burrs	$\vdash$		ions Incomplete/	Unclear	Part Lost/M		Wrong Stock Pulled
	⊢ Cu1					Contamination	$\vdash$	Mainte		<u> </u>	Part Moved		
1	I IHO	at Troat	T			Countersink		Miclaha	ממו		Positioned	wrnng	

Misread

Out of Calibration

Out of Sequence

Outside Dimensions

Offset

Other

Power Loss/Surge

Turning Sequence

Wave/Twist in Tube

Ripples in Bend

Inspection Strip in Tube

Torque Waves in Extrusion

Cut Too Short

Drill Holes

Drawing

Finish

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Work Ord November-27-12				*938	394*							Page 11	
Item ID: Revision ID:	D350-636-	015		Accept	*N900	<b>040</b>	100	)*	Setup	Start	1.71	S1*	
Item Name:	Skidtube ST	D w/ Training Wearplates	s, LH							Stop	*N	S2*	
Start Date: Required Date:	11/27/12 12/14/12	Start Qty: 1.00 Req'd Qty: 1.00	*1* *1*		Cust Item I Customer:	D:							
Reference:			-										
Approvals:	Process P	lan:	Date:	Tooling:	Da	ıte:			Run	Start Stop	I <i>Z</i> I	R1*	
	QC:		Date:	_ SPC (Y/N):	Da	ıte:				жор	*N	R2*	
Sequence ID/ Work Center II	D	Operation Description	· · · · · · · · · · · · · · · · · · ·	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	t Re	_	Reject Number	Insp. Stamp	_
280		QC21- Final Inspection -	- Work Order Release	0.00							}	1 ~~	$\Lambda$
*280*		Memo		0.00						12	[12]	184	
Quality Control										A	^ <i>/</i>	8-12	

112-18-12

NICD.	Voc	1	NI.
NCR:	Yes	/	No

# **WORK ORDER NON-CONFORMANCE / UPDATE**

DQA:	Date:	

									QA Closed:	Date	2:
Work Orde	r•				DISPOSITION			AGAINST DE	PARTMENT	/PROCESS	
Part N					Rework Scrap	- I	Skid-tube Machining	Crosstube Small Fab	4	Water Jet d. Eng. Coor.	Engineering Quality
NCR N	0	<del></del>		<del></del>	Use-as-is Work Order Update	Ther	moforming Large Fab	Finishing Composite	Rec/Sto	re/Packaging Supplier	Other
Root				Descri	ption of work order update	Initial	Ac	tion	Sign &		
Cause	Date	Step	Qty	•	or Non-conformance	Chief Eng	Desc	ription	Date	Verification	QC Inspector
Doc/Data											
quip/Tooling											
Operator		}									
Material		İ									
Setup											
Other											
Process											
Supplier											
raining				:							
Jnapproved			- 1				1				
					F	AULT CATI	GORY				
Landin	g Gear				General				_	_	
	Bending				Bend	Grain			Ovalized	L	Pressure/Forced
	Centre No	ot Concer	ntric to (	o/s	BOM/Route	Hardw	are		Over/Under	tolerance	Temperature/Cure
	Cracks				Broken/Damaged	Inspec	tion Incomplete		Part Incorre	ct	Weld
	Crushed/	Crimped			Burrs	Instruc	tions Incomplete/	'Unclear	Part Lost/M	issing	Wrong Stock Pulled
	Cuffs	-			Contamination	Maint	enance		Part Moved		
Ī	Heat Trea	at			Countersink	Mislab	eled		Positioned \	Nrong _	<u>_</u>
	Inspectio	n Strip in	Tube		Cut Too Short	Misrea	ad		Power Loss,	′Surge [	Other
	Ripples in	Bend			Drill Holes	Offset					
. [	Torque W	/aves in E	xtrusio	n	Drawing	Out of	Calibration				
	Turning S				Finish	Out of	Sequence				
- t,	Wave/Tw	-			Folio	Outsid	e Dimensions				

## **Picklist Print**

November-27-12 2:42:13 PM

Work Order ID:

93894

Parent Item:

D350-636-015

DD verf:EC

Parent Item Name:

Skidtube STD w/ Training Wearplates, LH

**Start Date:** 11/27/12

Required Date: 12/14/12

Start Qty: 1.00

Required Qty: 1.00

Comments:

IPP rev:A 10.09.28 new issue DD verf:EC

IPP Rev:B 11.04.14 ecn11-553

IPP Rev:C 11.10.18 as per NCR 11-906 DD verf:EC

IPP

Rev.D. 112.04.16. AS PER ECN 12-542. DD. verf.EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
ANSCE 4A BOLT		Purchased	No			230	Each	16.0000	1	1	12/12	117	
				<b>Location</b>		Loc Oty	Lo	c Code					
				ST352		16							
· S				123	3642	16				1			
ANEC36A BOLT		Purchased	No			230	Each	178.0000	4 	4	12		
				<b>Location</b>		Loc Qty	<u>Lo</u>	c Code					
				FG		24							
					1261	4							
•					2204	20				1			
				ST353		154			<u> </u>	<u></u>			
					5590	0							
3.					9083	1							
·					9324	3							
					1689	13							
•					2204	25							
					2491	8							
				123	3642	100 4							

												DQA:	Date:	
NCR:	Yes	/ No					WORK ORDER NON-O	100	NFOR	MANCE / UP	DATE	•	<del></del>	
												QA Closed:	Date:	
Vork Ord	er:						DISPOSITION				AGAINST DE	PARTMENT	PROCESS	
Part NCR	No.						Rework Scrap Use-as-is Work Order Update		Thern	Skid-tube  Machining noforming Large Fab	Crosstube Small Fab Finishing Composite	4	Water Jet d. Eng. Coor. re/Packaging Supplier	Engineering Quality Other
			T .	1						ial Action		Cian 0		
Root		Data	Ston	054	Des		otion of work order update or Non-conformance	1	nitial iief Eng		ription	Sign & Date	Verification	QC Inspector
Cause	1	Date	Step	Qty			ir Non-comormance	Cn	ner Eng	Desc	прсіоп	Date	verincation	QC IIIspector
oc/Data quip/Tooling	<u> </u>													
perator	<u> </u>													
laterial	L	-												·
etup	<u> </u>													
ther	$\vdash$													
rocess	$\vdash$													,
upplier 	$\vdash$		1											
raining								1						
napproved	4		<u>!</u>					ΔΗ	T CATE	L		<u>.L</u>	L	1
Land	ing (	Gear					General		. CATE					
		Bending			. [		Bend		Grain		· [	Ovalized		Pressure/Forced
		Centre No	ot Concei	ntric to (	o/s	_	BOM/Route		Hardwa	re		Over/Under	tolerance	Temperature/Cure
:\$		Cracks					Broken/Damaged		Inspect	on Incomplete		Part Incorre	ct	Weld
		Crushed/Crimped. Burrs					$\vdash$	4	ions Incomplete/	'Unclear	Part Lost/Mi	issing	Wrong Stock Pulled	
		Cuffs Contamination						Mainte	nance		Part Moved	·	_	
	Heat Treat Countersink						Countersink		Mislabe	eled		Positioned V	Vrong	_
	Inspection Strip in Tube Cut Too Short					Misread Power Loss/Surge Other			Other					
	Ripples in Bend Drill Holes						Offset							
		Torque W	aves in E	xtrusion	n		Drawing	Out of Calibration						
	Turning Sequence Finish								Out of	Seauence		_ <del></del>		

Outside Dimensions

Wave/Twist in Tube

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

November-27-12 2:42:13 PM

Work Order ID:	93894										
Parent Item:	D350-636-015						Start	Date: 11/27/12		Required Date: 12/1	14/12
Parent Item Name:	Skidtube STD w/ Training Wearplates, I	LH					Start	<b>Qty:</b> 1.00		Required Qty: 1.00	
ANECETA BOLT	Purchased	No			250	Eacl	h 166.0000	<b>4</b>	1	JB	
			Locatio	<u>n</u>	Loc Q	<u>ty</u>	Loc Code			•	<b>\</b>
$\wedge$			ST353		1	66					
5m/>				116874		11					
•				117010		2		-			
				120422		3					
				121584		1		-			
				122204		4					
				122491		50		122/	1/2	L	₽
				123642		95		1236	70		
ANEG42A BOLT	Purchased	No			250	Eac	h 37.0000	7	1	7.8	12/12/18
Bobi			Locatio	<u>n</u>	Loc Q	<u>ty</u>	Loc Code	4		V	
			FG			5					
24				121103		5					
			ST354			32					
				106176		1					
				121103		0			_		
				122241		1					
				122843		30		12284	13		•
DEMEZ-O	Manufactured	No			230	Eac	h 50.0000	8	8	Mula	
, ind			Locatio	<u>n</u>	Loc Q	<u>ty</u>	Loc Code	•			
			FP001			33	1393940	)χ	Q		
				83098		7					
				91466		26					
			FP002			17					
				69531		8			_		
				74444		2			_		
				76235		4					
				88541		3					

												DQA:	Dat	e: _	
NCR:	Yes	/ No				WORK ORDER NON-	COI	NFORM	MANCE / UF	PDATE					
		<b></b> -							i.			QA Closed:	Dat	e:	
Work Ord	or.					DISPOSITION				AGAINST	DE	PARTMENT	PROCESS		
WOIK OIG	CI.	<del></del>			<del></del>	Rework	1		Skid-tube	Crosstube		]	Water Jet	$\neg$	Engineering
Part I	No					Scrap	1		Machining	Small Fab	_	Pro	d. Eng. Coor.	$\dashv$	Quality
1 4101	10.					Use-as-is	1	i .	noforming	Finishing	-	•	e/Packaging	ᅱ	Other
NCR I	No.					Work Order Update	1	ı	Large Fab	Composite		11.00,010.	Supplier	$\dashv$	
										•	<b></b>		٠, ر		
Root					Descri	ption of work order update		Initial	А	ction '		Sign &			
Cause		Date	Step	Qty		or Non-conformance	Cr	nief Eng	Des	cription		Date	Verification	1	QC Inspector
Doc/Data															
Equip/Tooling					ł.		1								
Operator															
Material	L		Ĭ												
Setup	L														
Other															
Process										•					
Supplier															
Training														- 1	
Unapproved			l	<u> </u>	<u> </u>										
							AUI	LT CATE	GORY						4
Landi	ng (	1			_	General		1			_	7	1	$\overline{}$	
	<u> </u>	Bending				Bend	-	Grain			<u> </u>	Ovalized		ш	Pressure/Forced
·		Centre No	ot Conce	ntric to	<sup>O/S</sup>  -	BOM/Route	-	Hardwa			_	Over/Under	1	-	Temperature/Cure
	$\vdash$	Cracks	Calana			Broken/Damaged	$\vdash$	<b>-</b> 1 `	ion Incomplete	/I Implem	-	Part Incorre			Weld
	$\vdash$	Crushed/	crimped.		<u> </u>	Burrs	$\vdash$	-1	ions Incomplete	Unclear	H	Part Lost/M	issii ig	Ш	Wrong Stock Pulled
	1	Cuffs			1	Contamination	1	Mainte	enance		1	Part Moved			

Mislabeled

Out of Calibration

Out of Sequence

Outside Dimensions

Misread

Offset

Positioned Wrong

Power Loss/Surge

Other

Turning Sequence

Wave/Twist in Tube

Ripples in Bend

Heat Treat

Inspection Strip in Tube

Torque Waves in Extrusion

Countersink

Cut Too Short

Drill Holes

Drawing

Finish

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November-27-12 2:42:14 PM

Work Order ID:	93894							
Parent Item:	D350-636-015					Start I	Date: 11/27/12	Required Date: 12/14/12
Parent Item Name:	Skidtube STD w/ Training Wearplates,	LH				Start	<b>Qty:</b> 1.00	Required Qty: 1.00
1)349243 Plug	Manufactured	No		230	Each	123.0000	8 11 8	12/12/12
			<b>Location</b>	Loc Qty		Loc Code		
			FP001	123				
			81967	5				
			83099	3				
			85461	1				
4			86865	2				
			90322	24 48			$\overline{}$	
			91610 92537	40				1
D3878-0 Bushing	Manufactured	No	72551	230	Each	429.0000	7 11 7	11/17/17
Dushing—			<u>Location</u>	Loc Qty		Loc Code		
			ST067	4		<del></del>		
			90492	4				
			ST069	425				
			91188	425			¥ 7	
D <b>41154</b> 40 <b>41</b> Wearplate Assembly	Manufactured	No		230	Each	0.0000	139037	2 (41) Al ala
D4170-1 Bushing	Manufactured	No		230	Each	32.0000	4 4	2 (41) HU n/12 BE 12-12-11
			Location	Loc Qty		Loc Code		
	,		LG001	9				
			71844	5				
			82043	4				
			LG002	13				
			90270	13				
			LG003	10				
			82222	10			ZD	

								DQA.	Date.	
NCR: Yes	/ No			WORK ORDER NON-C	CONFORI	MANCE / UP		QA Closed:	Date:	
Work Order:				DISPOSITION		i	AGAINST DE	PARTMENT	PROCESS	
Part No.  NCR No.  Root Desc				Rework Scrap Use-as-is Work Order Update		Skid-tube Machining noforming Large Fab	Crosstube Small Fab Finishing Composite		Water Jet d. Eng. Coor. ee/Packaging Supplier	Engineering Quality Other
Root				Description of work order update	Initial	Act	tion	Sign &		
Cause	Date	Step	Qty	or Non-conformance	Chief Eng	Desc	ription	Date	Verification	QC Inspector
oc/Data duip/Tooling Operator Material etup										

DOA.

#### Unapproved **FAULT CATEGORY Landing Gear** General Ovalized Pressure/Forced Bending Bend Grain BOM/Route Over/Under tolerance Temperature/Cure Centre Not Concentric to O/S Hardware Weld Cracks Broken/Damaged Inspection Incomplete Part Incorrect Wrong Stock Pulled Crushed/Crimped. Burrs Instructions Incomplete/Unclear Part Lost/Missing Cuffs Contamination Maintenance Part Moved Mislabeled Positioned Wrong Countersink **Heat Treat** Misread Power Loss/Surge Other Inspection Strip in Tube Cut Too Short Ripples in Bend Drill Holes Offset Out of Calibration **Torque Waves in Extrusion** Drawing Turning Sequence Finish Out of Sequence Folio Outside Dimensions Wave/Twist in Tube

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Other Process Supplier Training

## **Picklist Print**

November-27-12 2:42:14 PM

Page 4

Work Order ID:	93894											
Parent Item:	D350-636-015							Start I	Date: 11	/27/12		Required Date: 12/14/12
Parent Item Name:		raining Wearplates, I	LH						<b>Qty:</b> 1.0			Required Qty: 1.00
<u></u>	Skiddade STB W/ T								Q.,	,		required Qey. 1.00
Danyus Baspus		Manufactured	No			230	Each	18.0000	1	<u>H)</u>	1	Mul 17
				Location		Loc Qty		Loc Code				
•				ST101		18						
				8	8430	9			_			
				9	1603	9			_	<b>Y</b>	_ ,	_
MS21043-3		Purchased	No			230	Each	434.0000	4	Щ	<i>A</i>	21/12/17
				Location		Loc Qty		Loc Code				
				FG		72			****			
				1	03691	72			_			
				ST301		81						
					18077	2						
				1	18614	7			_			
				1	18686	30			_	,		
					19758	20			_			
					21255	20			_			
				1	21708	2			_			
•				ST315		281						
				1	22993	145			_			
and the second s				1	23525	136			_	X5_		a
NAS1149G0363R Washer		Purchased	No			230	Each	4,239.0000	8	H	8	+ hala
3		i.		Location		Loc Qty		Loc Code				
- 9				297		2000						
					22441	2000						
**				ST297		2239						
					14742	2039			_	XI		
					22063	200			-	_^ -		

											DQA:	Date:	
NCR:	Yes	/ No				WORK ORDER NON-C	100	VFOR	MANCE / UP	DATE	·		
											QA Closed:	Date:	
Work Ord	er.					DISPOSITION				AGAINST DE	PARTMENT	/PROCESS	
. Part i	Part No.  NCR No.  Root Des Cause Date Step Qty					Rework Scrap Use-as-is Work Order Update		Thern	Skid-tube  Machining  noforming  Large Fab	Crosstube Small Fab Finishing Composite	4	Water Jet d. Eng. Coor. re/Packaging Supplier	Engineering Quality Other
Root					Descri	ption of work order update		Initial	Ac	tion	Sign &		
Cause		Date	Step	Qty	(	or Non-conformance	Ch	nief Eng	Desc	ription	Date	Verification	QC Inspector
Doc/Data Equip/Tooling Operator Material Setup Other Process Supplier Training Unapproved				al to a									
							AUL	T CATE	GORY				
Landi	ing (	1				General		1			<b>.</b>	_	٦
	Bending Centre Not Concentric to O/S Cracks Crushed/Crimped Cuffs					Bend BOM/Route Broken/Damaged Burrs Contamination		Hardware C Inspection Incomplete F Instructions Incomplete/Unclear F			Ovalized Over/Under Part Incorre Part Lost/M Part Moved	ct sissing	Pressure/Forced Temperature/Cure Weld Wrong Stock Pulled
•		Heat Trea	at			Countersink		Mislabe	eled		Positioned \	Wrong	7
1	1	Inspectio	n Strip in	Tube	1	Cut Too Short	1	Misread	<u> </u>		Power Loss	/Surge	Other

Offset

Out of Calibration

Out of Sequence

Outside Dimensions

Drill Holes

Drawing

Finish

Folio

Turning Sequence

Wave/Twist in Tube

Ripples in Bend

Torque Waves in Extrusion

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

### **Picklist Print**

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Page 5

Work Order ID: 93894 Parent Item: D350-636-015 **Start Date:** 11/27/12 Required Date: 12/14/12 Skidtube STD w/ Training Wearplates, LH Start Qty: 1.00 Required Qty: 1.00 Parent Item Name: NAS1049D0863J No 250 Each 113.0000 Purchased WASHER Loc Qty Loc Code Location ST298 113 18 118078 119307 120308 21566 93 121556 NAS1515H313 No 230 Each 106.0000 Purchased ululiz Location Loc Qty Loc Code 1/1123900 FG 40 102472 40 ST277 66 118686 3 120360 11 121556 45 122151 7 230 272.0000 NAS1611-010 Purchased No Each O'RING Loc Qty Location Loc Code FP001 272 110915 14 117460 8 118077 3 118612 119438 39 121259 2 121584 121723 122151 8 123348 144 123352 44

NCR:	Yes	1	No

												DQA:	Date:	
NCR:	⁄es	/ No					WORK ORDER NON-C	O	NFORM	/IANCE / UP	DATE	•	· · · · · · · · · · · · · · · · · · ·	
												QA Closed:	Date	`
Vork Orde	er:						DISPOSITION				AGAINST DE	PARTMENT	PROCESS	
Part N	٠ ا ١٥٠						Rework Scrap Use-as-is Work Order Update		Therm	Skid-tube  Machining noforming Large Fab	Crosstube Small Fab Finishing Composite	4	Water Jet d. Eng. Coor. re/Packaging Supplier	Engineering Quality Other
Root					Des	crip	otion of work order update		nitial	Ac	tion	Sign &		
Cause		Date	Step	Qty		C	or Non-conformance	Ch	ief Eng	Desc	ription	Date	Verification	QC Inspector
oc/Data quip/Tooling perator laterial etup ther rocess upplier raining														
								AUL	T CATE	GORY				
Landi	ng (	ì					General Bend	_	Crain			Ovalizad		Pressure/Forced
		Bending Centre Not Concentric to O/S Cracks Crushed/Crimped. Cuffs Heat Treat Inspection Strip in Tube					BOM/Route Broken/Damaged Burrs Contamination Countersink Cut Too Short		Grain Ovalized Hardware Over/Under tolerance Inspection Incomplete Part Incorrect Instructions Incomplete/Unclear Part Lost/Missing Maintenance Part Moved Mislabeled Positioned Wrong Misread Power Loss/Surge				ct issing Vrong	Temperature/Cure Weld Wrong Stock Pulled Other
	┡━						Drill Holes	<u></u>	Offset					
		Torque W			n		Drawing	-	4	Calibration				· · · · · · · · · · · · · · · · · · ·
		Turning S	equence			ı	Finish		Jout of S	Sequence				

Outside Dimensions

Wave/Twist in Tube

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

November-27-12 2:42:14 PM

Work Order ID:	93894							
Parent Item:	D350-636-015						Date: 11/27/12	Required Date: 12/14/12
Parent Item Name:	Skidtube STD w/ Training Wearpla	ites, LH				Start	<b>Qty:</b> 1.00	Required Qty: 1.00
NAS 1611-013 O-RING	Purchased	No		230	Each	256.0000	8	8 11171n
			<b>Location</b>	Loc Qty		Loc Code		
			FP001	256				<u> </u>
			116582	5				_
			117291	2			-	<del>_</del>
			117887	53				_
			119623	36 10			-	_
			121825 122993	3				
			123741	147			Ϋ́	_
DET483	Manufactur	ed <sup>No</sup>	<b>\$</b>		Each	43.0000	1	1 861212-07
			<b>Location</b>	Loc Qty		Loc Code		
			LG002	43				
			62715	1				_
			85506 91307	16 26				_
D2600-3-BENT Extrusion Bent	Manufactur	ed <sup>No</sup>	71307		Each	25.0000	100	Y 12 12 7
Extrusion Bent			<u>Location</u>	Loc Qty		Loc Code	1/1	112-12-1
						Loc Code		
			LG 66875	25 7			-	<del>_</del>
			73253	1				_
			75021	1				<del></del>
			75022	1				
			75023	1				
			81330	4				<u> </u>
			83305	1				_
			92049	9			$\mathcal{O}$	<u> </u>

												DQA:	Da	te:	
NCR:	Yes	/ No				WORK ORDER NON-O	100	NFORM	MANCE / UP	PDATE		·			
												QA Closed:	Da	te:	
Work Ord	or:					DISPOSITION				AGAINST	DE	PARTMENT	/PROCESS		
Work Ord	er.					Rework	ı İ		Skid-tube	Crosstube		İ	Water Jet		Engineering
Part	No					Scrap	1	B .	Machining	Small Fab		Pro	d. Eng. Coor.	Н	Quality
1 41(	10.					Use-as-is	┪╽		noforming	Finishing	-	1	e/Packaging	Н	Other
NCR	Nο					Work Order Update	1	1	Large Fab	Composite		Nec/3tol	Supplier		
						Work order opadie	ן נ		Luige ( ub	composite			Supplier	نـــا	
Root					Descri	ption of work order update	П	Initial	Ad	ction		Sign &			
Cause		Date	Step	Qty	(	or Non-conformance	Ch	nief Eng	Desc	cription		Date	Verificatio	n	QC Inspector
Doc/Data													·		
Equip/Tooling															<u>:</u>
Operator			1				1								
Material												,		-	7
Setup							ļ								
Other	L						1								
Process	<u></u>														
Supplier	L														
Training															
Unapproved	L						<u> </u>						<u></u>		
							AUL	LT CATE	GORY						
Landi	ing (	3			_	General		1							1
	<u> </u>	Bending				Bend		Grain				Ovalized		-	Pressure/Forced
	$\vdash$	Centre No	ot Concei	ntric to	o/s	BOM/Route	_	Hardwa				Over/Under		<u>_</u>	Temperature/Cure
	H					Broken/Damaged	_	4	ion Incomplete	_	_	Part Incorre		<u> </u>	Weld
						Burrs	_	-	ions Incomplete	/Unclear		Part Lost/Mi	issing		Wrong Stock Pulled
	_	Cuffs			<u></u>	Contamination	<u>_</u>	Mainte			<u> </u>	Part Moved			
	Heat Treat					Countersink	$\vdash$	Mislabe			<u> </u>	Positioned V	_		1 .
1	1	Inspectio	n Strip in	Tube		Cut Too Short		Misread	Ė			Power Loss/	'Surge	l	Other

Offset

Out of Calibration

Out of Sequence

Outside Dimensions

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

Turning Sequence

Wave/Twist in Tube

Ripples in Bend

Torque Waves in Extrusion

Drill Holes

Drawing

Finish

Location Loc Qty Loc Code LG004 14

160

Each

14

14.0000

92596

90352

Manufactured

No

		DQA:	Date:	
NCR: Yes / No	WORK ORDER NON-CONFORMANCE / UPDATE			

				*.	ě					<del></del>	QA Closed:	Date	•
Work Order:						DISPOSITION		AGAINST DEPARTMENT/PROCESS					
Part NoNCR No						Rework Scrap Use-as-is Work Order Update		Machining Small Thermoforming Finish		Crosstube Small Fab Finishing Composite	Prod. Eng. Coor. Quality		Engineering Quality Other
Root		Descri			Descri	ption of work order update		nitial	A	ction	Sign &		
Cause		Date	Step	Qty		or Non-conformance		ief Eng	<b>+</b>		Date	Verification	QC Inspector
Doc/Data	П		3.56					<u> </u>					
Equip/Tooling	H									·			
Operator	H		[										
Material	Н												
Setup													
Other	П		]		*								
Process	$\Box$												
Supplier													
Training													
Unapproved													
FAULT CATEGORY													
Landi	ng G	iear				General					_		
	Bending					Bend		Grain			Ovalized		Pressure/Forced
		Centre Not Concentric to O/S BOM/Route Cracks Broken/Damaged Crushed/Crimped Burrs				BOM/Route		Hardware			Over/Under tolerance		Temperature/Cure
						Broken/Damaged		Inspect	ion Incomplete		Part Incorre	ct	Weld
	Ш					Burrs		Instructions Incomplete/Unclear			Part Lost/Missing		Wrong Stock Pulled
		Cuffs				Contamination		Mainte	enance		Part Moved		
	Ш	Heat Treat				Countersink		Mislabe	eled		Positioned V	Vrong	<del>,</del>
F.		Inspection Strip in Tube				Cut Too Short		Misrea	đ		Power Loss/	Surge	Other
	Ш	Ripples in Bend				Drill Holes	$\vdash$	Offset					
	Ш	Torque Waves in Extrusion				Drawing		Out of Calibration					
		Turning Sequence				Finish		Out of	Out of Sequence				
		Wave/Twist in Tube				Folio		Outside Dimensions					

. November-27-12 2:42:15 PM

Dayson   Manufactured   No   160   Each   72,0000   4   4   4   3   4   4   3   4   4   3   4   4	Work Order ID: Parent Item:	93894 D350-636-015					Start D			Required Date: 12/14/12
Cross Bolt Spacer    Location   Loc Otc     LG001   9	Parent Item Name:	Skidtube STD w/ Training Wearplates, l	LH				Start (	<b>Qty:</b> 1.0	00	Required Qty: 1.00
LG001   9		Manufactured	No		160	Each	72.0000	4	<u> </u>	BE12-12-11
62450   2				Location	Loc Qty		Loc Code			
74875				LG001	9					
LG004   63				62450	2					
LG004 63 81976 2 86979 14 22572 47  Purchased No 230 Each 1,687.0000 4  Location Loc Oty Loc Code  ST279 1687  108696 146 110768 62 118386 55 118966 68 5120410 10 120451 13 121269 77				74875	4					
81976 2 86979 14 92572 47  Purchased No 230 Each 1,687.0000 4 12 12 12 12 12 12 12 12 12 12 12 12 12 1	*			77042	3					
No   230   Each   1,687.0000   4   1   1   1   1   1   1   1   1   1				LG004	63					
Purchased No 230 Each 1,687.0000 4 4 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1				81976	2					
Purchased No 230 Each 1,687.0000 4 4 4 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1					14			_		
Location   Loc Otv   Loc Code				92572	47			_		
ST279 1687  108696 146  110768 62  118386 55  118966 68  120410 10  120451 13  121269 77		Purchased	No		230	Each	1,687.0000	4	lld 4	12/12/12
108696 146 110768 62 118386 55 118966 68 120410 10 120451 13 121269 77				<b>Location</b>	Loc Oty		Loc Code			
110768       62         118386       55         118966       68         120410       10         120451       13         121269       77				ST279	1687					
118386       55         118966       68         120410       10         120451       13         121269       77				108696	146					
118966     68       120410     10       120451     13       121269     77				110768	62			_		
120410 10 10 120451 13 121269 77				118386	55					
120451 13 121269 77										
121269 77	r.							_		
									V. (	
$\frac{122290}{122827}$ $\frac{256}{1000}$				122290	256				<u> </u>	

											DQA:	Date:	
NCR:	Yes	/ No				<b>WORK ORDER NON-</b>	COI	VFORI	MANCE / UP	DATE			
											QA Closed:	Date:	·
Work Orde	er.					DISPOSITION				AGAINST DE	PARTMENT	/PROCESS	
Part I						Rework Scrap			Skid-tube Machining	Crosstube Small Fab	Pro	Water Jet d. Eng. Coor.	Engineering Quality
NCR I		·				Use-as-is Work Order Update	<b>-</b>	Thern	noforming Large Fab	Finishing Composite		re/Packaging Supplier	Other
										· •			
Root					Descri	ption of work order update		nitial	Act	tion	Sign &		
Cause		Date	Step	Qty	(	or Non-conformance	Ch	ief Eng	Desci	ription	Date	Verification	QC Inspector
Doc/Data	Ш	]		·		•							
Equip/Tooling						·							
Operator													
Material	Ш												
Setup	Ш												
Other	Ш												
Process	Ш												
Supplier													
Training													
Unapproved													
						, , , , , , , , , , , , , , , , , , ,	AUL	T CATE	GORY				
Landi	ng G	Gear				General					•		,
1		Bending				Bend		Grain			Ovalized	ļ	Pressure/Forced

Hardware

Maintenance

Out of Calibration
Out of Sequence

Outside Dimensions

Mislabeled

Misread

Offset

Inspection Incomplete

Instructions Incomplete/Unclear

Temperature/Cure

Wrong Stock Pulled

Weld

Other

Over/Under tolerance

Part Incorrect

Part Moved

Part Lost/Missing

Positioned Wrong

Power Loss/Surge

BOM/Route

Contamination

Countersink

Cut Too Short Drill Holes

Drawing

Finish

Folio

Burrs

Broken/Damaged

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Turning Sequence

Wave/Twist in Tube

Ripples in Bend

Cracks

Cuffs

Heat Treat

Crushed/Crimped.

Inspection Strip in Tube

Torque Waves in Extrusion

Centre Not Concentric to O/S

November-27-12 2:42:15 PM

Work Order ID:	93894										
Pärent Item:	D350-636-015			•				Start Da	te: 11/	27/12	Required Date: 12/14/12
Parent Item Name:	Skidtube STD w/ Tr	raining Wearplates, I	_H					Start Q	ty: 1.0	)	Required Qty: 1.00
ANSC35AT		Purchased	No			230	Eac	h 57.0000	1	<u> </u>	11/11/12
				Location	<u>n</u>	Loc Oty		Loc Code			
				FG		5					
					121275	5			_		
1-				FP001		49					
					123642	49			_		
				FP002		2					
					115960	1		11173642	_		
					121275	i		111110012	_	x (	
				ST346		1					
					114442	0					
					115188 115960	0					
D3488-041		<b>N</b> 4 C 4 1	No		113900	230	Eac	h 13.0000		1	1 /
Blade Fitting Assembly,	MHA	Manufactured	140			230	Lac	15.0000		$\mathcal{Y}$ 1	ulalu
Division of the second of the	<u>,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,</u>			Locatio	n	Loc Qty		Loc Code			
				FP002	<u>.</u>	13		200 2000			
4.				11002	83407	1					
. la					85733	1					
No.					88255	11			_	y (	
AN6G44A		Purchased	No			230	Eac	h 26.0000	4	011 4	1 1 .
BOLI		Turenasea							-	<u> </u>	ululu
				Locatio	<u>n</u>	Loc Qty		Loc Code			
,				FG		2					
					103964	2			_		
				ST340		6					
					122491	6					
				ST341		4					
					122843	4					
				ST343		14					
					121013	11		11123930		V	
					121167	2		1.1163 100			
					122204						

												DQA:	D	ate:	
NCR:	Yes	/ No				WORK ORDER NON-	COI	NFORM	MANCE / UP	DATE		QA Closed:		ate:	
Work Ord	er.					DISPOSITION				AGAINST D				ate.	
Part I	-  					Rework Scrap Use-as-is Work Order Update		! Therm	Skid-tube  Machining noforming Large Fab	Crosstube Small Fab Finishing Composite			Water Je d. Eng. Coor e/Packaging Supplie		Engineering Quality Other
Root			[		Descri	ption of work order update	П	Initial	Ac	tion		Sign &			
Cause	$\perp$	Date	Step	Qty		or Non-conformance	Ch	nief Eng	Desc	ription		Date	Verification	on	QC Inspector
Doc/Data Equip/Tooling Operator Material Setup Other Process Supplier Training Unapproved						<del>-</del>						,			
						F	AUL	T CATE	GORY						
Landi	$\overline{}$	ear Bending				<b>General</b> Bend	<u> </u>	Grain			7	Ovalized			Pressure/Forced
		Centre No Cracks	ot Concer	ntric to	o/s	BOM/Route Broken/Damaged		Hardwa	re on Incomplete			Over/Under			Temperature/Cure Weld
	Ц	Crushed/ Cuffs	Crimped.			Burrs Contamination		4	ions Incomplete/	Unclear		Part Lost/Mi			Wrong Stock Pulled
	∐'	Heat Trea				Countersink		Mislabe	led	<u> </u>	-	Positioned V	_	_	1 .
	$\vdash$	nspection	•	Tube		Cut Too Short Drill Holes	-	Misread	I	L		Power Loss/	Surge	L	Other

Out of Calibration

Out of Sequence

Outside Dimensions

Turning Sequence

Wave/Twist in Tube

Torque Waves in Extrusion

Drawing

Finish

Folio

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

November-27-12 2:42:15 PM

Work Order ID:	93894									
Parent Item:	D350-636-015						Start D	ate: 11/2	27/12	Required Date: 12/14/12
Parent Item Name:	Skidtube STD w/ Tr	raining Wearplates, l	LH				Start (	Qty: 1.00	)	Required Qty: 1.00
MS21083C8		Purchased	No		230 E	Each	19.0000	1	<u>M</u> 1	ulnla
				<b>Location</b>	Loc Qty		Loc Code			
				ST319	19					
				115884	1					
				118077	1					
				119309	2					
				119638	1				<u> </u>	
				122141	5					
				122452	2					
				123346	7				× /	
DIEL-O Weighen		Manufactured	No		230 E	Each	143.0000	8	Jel 8	12/17/12
				Location	Loc Qty		Loc Code			
				FP001	128					
				81874	2					
				83588	18					
				91606	8					
		•		93321	100					
				ST072	15			,	X 8	
€,				68062	2					
				75548	13					•
AN960GIOL	NAS1149C0332R	Purchased	No		230 E	Each	21.0000	4	Ill4	nala
*				<b>Location</b>	Loc Oty		Loc Code			
<b>1</b>				ST245	21					
				107534	21				11	
						17	7756		<del></del>	
					$\mathcal{N}$	16	3759			

								DQA	: Date:	
NCR: Y	es / No				WORK ORDER NON-C	ONFO	RMANCE / UPDATE			
i					·		, 	QA Closed	: Date:	
Work Order	<b>.</b> .				DISPOSITION		AGAINST	DEPARTMEN	T/PROCESS	
Part No	o			·	Rework Scrap Use-as-is Work Order Update	The	Skid-tube Crosstube  Machining Small Fab  ermoforming Finishing  Large Fab Composite		Water Jet od. Eng. Coor. ore/Packaging Supplier	Engineering Quality Other
						1	20.80 (0.0			
Root			. 1	Descri	ption of work order update	Initia	Action	Sign &		
Cause	Date	Step	Qty	,	or Non-conformance	Chief E	ng Description	Date	Verification	QC Inspector
Doc/Data				a* **						
Equip/Tooling										
Operator										
Material						ı				
Setup										
Other						<u> </u>				
Process										
Supplier										
Training						1		ļ ļ		
Unapproved										
					. F	AULT CA	TEGORY			
Landin	g Gear				General	_				7
	Bending				Bend	Grai	n	Ovalized	<u></u>	Pressure/Forced
L	Centre No	ot Conce	ntric to	o/s	BOM/Route	Hard	ware	Over/Unde	er tolerance	Temperature/Cure
	Cracks				Broken/Damaged	<del></del>	ection Incomplete	Part Incorr	<del> </del>	Weld
1	Crushed/	Crimped.		_	Burrs	$\vdash$	uctions Incomplete/Unclear	Part Lost/I	Alissing	Wrong Stock Pulled
.	Cuffs				Contamination	Mai	ntenance	Part Move	d	

Mislabeled

Out of Calibration

Outside Dimensions

Out of Sequence

Misread

Offset

Positioned Wrong

Power Loss/Surge

Other

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

Turning Sequence

Wave/Twist in Tube

Ripples in Bend

Heat Treat

Inspection Strip in Tube

Torque Waves in Extrusion

Countersink

Cut Too Short Drill Holes

Drawing

Finish

Folio

November-27-12 2:42:15 PM

Work Order ID:	93894					
Parent Item:	D350-636-015			Start Dat	te: 11/27/12	Required Date: 12/14/12
Parent Item Name:	Skidtube STD w/ Training Wearplates,	LH		Start Qt	ty: 1.00	Required Qty: 1.00
2945 Jushing	Manufactured	No	230 Each	h 140.0000	8 W 8	alala
		<b>Location</b>	Loc Qty	Loc Code		
		FP001	10			
		69529	1			
		76142	1			
		79518	6			
		83260	2			
		ST017	130			
		90323	60			
		92539	70		<u> </u>	
AS004900832R VASHER	Purchased	No	230 Eaci	h 384.0000	1	1 11/17/12
- 4		Location	Loc Qty	Loc Code		
		296	200			
		122441	200			
		ST297	184			
		114915	184		1/1	

NCR:	Yes /	No	WORK ORDER NO

DQA: \_\_\_\_\_ Date: \_\_\_\_

NCR: Y	es .	/ No				WORK ORDER NON-	CONF	-UKIV	MANCE / UPL	JAIE	QA Closed:	Dat	te:
Work Orde	er:					DISPOSITION				AGAINST D	EPARTMENT	/PROCESS	
Part N						Rework Scrap		r	Skid-tube Machining	Crosstube Small Fab		Water Jet d. Eng. Coor.	Engineering Quality
NCR N	lo					Use-as-is Work Order Update	_		noforming Large Fab	Finishing Composite	Rec/Stor	e/Packaging Supplier	Other
Root					Descr	iption of work order update	Ini	tial	Act	ion	Sign &		
Cause		Date	Step	Qty		or Non-conformance	Chie	f Eng	Descr	iption	Date	Verification	n QC Inspector
oc/Data													
quip/Tooling	_												
perator	_												
⁄Iaterial	_					÷							
etup	$\dashv$												
Other	4												
rocess	$\dashv$												
upplier	$\dashv$												
raining Jnapproved	$\dashv$												
mapproved [						F	AULT	CATE	GORY			1	
Landir	ng Ge	ear				General							
. [		Bending				Bend	ПG	irain			Ovalized		Pressure/Forced
	_	Centre No	t Concer	ntric to (	o/s	BOM/Route	Н	ardwa	re		Over/Under	tolerance	Temperature/Cure
Ì		Cracks				Broken/Damaged	Ir	nspecti	on Incomplete		Part Incorre	ct	Weld
		Crushed/C	rimped.			Burrs		nstruct	ions Incomplete/U	Jnclear	Part Lost/M	issing	Wrong Stock Pulled
	$\neg$	Cuffs				Contamination	$\square$	/lainte	nance		Part Moved		<del></del>
	⊢	Heat Treat	t			Countersink	$\square$	∕lislabe	led		Positioned \	<b>V</b> rong	
		nspection	Strip in	Tube		Cut Too Short	$\square$ N	⁄lisreac	i		Power Loss/	'Surge	Other
[	R	Ripples in	Bend			Drill Holes		ffset					
[	T	orque W	aves in E	xtrusion	ո [	Drawing		ot of 0	Calibration				
	ַן	Turning Se	equence			Finish		ot of S	Sequence				
	١V	Nave/Twi	st in Tub	e		Folio	0	Outside	Dimensions				

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. November-27-12 2:42:15 PM

Work Order ID:

93894

Parent Item:

D350-636-015

Parent Item Name:

Skidtube STD w/ Training Wearplates, LH

**Start Date:** 11/27/12

Required Date: 12/14/12

Start Qty: 1.00

Required Qty: 1.00

		,		
ANEGGA BIOLIT	Purchased	No	230 Each 867.000	0 4 H 4 ululiz
		Location	Loc Qty Loc Code	
		FG .	10	
		122416	10	
		FP001	1	
		111982	1	
		ST351	856	
		111982	2	No.
		116419	23	
		116549	2	
		116704	12	
		117619	10	<del></del>
		117688	1	
		117872	5	
		118422	13	
		119449	21	
		120423	3	
		120693	34	
		121682	4	
		122416	282	<del></del>
		122599	444	
VIS21048-6	Purchased	No	230 Each 368.000	oo 4 Hl 4 yluliz
		Location	Loc Qty Loc Code	
		FG	20	
		103693	20	
		ST301	348	
		01501	310	

344

117887

											DQA:	Date:	
NCR:	Yes	/ No				WORK ORDER NON-C	100	NFORM	MANCE / UP	DATE			
											QA Closed:	Date:	
Work Ord	er:					DISPOSITION				AGAINST DE	PARTMENT,	/PROCESS	
Part I	No.			:		Rework Scrap Use-as-is Work Order Update		t Therm	Skid-tube  Machining  noforming  Large Fab	Crosstube Small Fab Finishing Composite		Water Jet d. Eng. Coor. re/Packaging Supplier	Engineering Quality Other
											·		
Root					1	ption of work order update	ł	nitial	Act	tion	Sign &		
Cause		Date	Step	Qty	C	or Non-conformance	Ch	ief Eng	Desc	ription	Date	Verification	QC Inspector
Doc/Data	Ш												
Equip/Tooling	Ш												
Operator													
Material	Ш												
Setup	Ш												
Other	Ш												
Process	Ш		İ						i				
Supplier													
Training	Ш												
Unapproved			<u> </u>	İ	<u> </u>								
							AUL	T CATE	SORY		<u> </u>		
Landi		1				General		1			1		<b>7</b> _
		Bending			_	Bend	$\vdash$	Grain		<u> </u>	Ovalized		Pressure/Forced
	-	Centre No	ot Concei	ntric to	o/s	BOM/Route	<u> </u>	Hardwa		<u> </u>	Over/Under	<del></del>	Temperature/Cure
	-	Cracks			-	Broken/Damaged		1	ion Incomplete		Part Incorre	<del> </del>	Weld
	-	Crushed/	Crimped.			Burrs	<u></u>	4	ions Incomplete/	Unclear	Part Lost/M	issing	Wrong Stock Pulled
ĺ	$\vdash$	Cuffs				Contamination	<u></u>	Mainte		<u> </u>	Part Moved		
		Heat Trea	it			Countersink	<u></u>	Mislabe	:led		Positioned \		7
i .	1	Inspection	n Strin in	Tube	1	Cut Too Short		Misread	1	j	Power Loss	Surge	Other

Offset

Out of Calibration
Out of Sequence

Outside Dimensions

Turning Sequence

Wave/Twist in Tube

Ripples in Bend

Torque Waves in Extrusion

Drill Holes

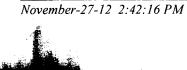
Drawing

Finish Folio

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ork Order ID:	93894							•		
rent Item:	D350-636-015						Star	t Date: 11/27/12	]	Required Date: 12/14/12
rent Item Name:	Skidtube STD w/ Train	ing Wearplates, L	Н				Sta	rt Qty: 1.00		Required Qty: 1.00
493-fr asher	N	Manufactured	No		250	Each	67.0000	2	2	~ 10 J
				Location	Loc Qty		Loc Code			
6.1	`			ST052	67					•
5m-				77573	1					
				82023	2				_	.£
				92533	64			925	<u> </u>	
S21083@8 FT	F	Purchased	No		250	Each	19.0000	12390	2	2 8
				Location	Loc Qty		Loc Code	•		
				ST319	19				_	
Sof	\			115884	1				_	
				118077	İ			-	_	
				119309	2				_	
				119638	l					
				122141 122452	5 2				_	<b>A</b>
				123346	7			<del></del>	_	
8 <b>C2I</b> Ñ LT	F	Purchased	No	125310	250	Each	12.0000	GA1239	2 2	-23
LI				<b>Location</b>	Loc Qty		Loc Code	V/ 1-10 - 1	<i>O</i> /	79
				ST342	12					
Sms				118758	1					<b>4</b>
<i></i>				122519	1					
				123642	10			1 12364	2	
de, 350 Skidtube	N	Manufactured	No		250	Each	33.0000		1	JB 12/12
				<b>Location</b>	Loc Oty		Loc Code			<i>y</i>
5ms				FG	1				_	
- , , ,				85480	1				_	
				ST466	32				_	
				71856	1					
				85480	2				_	
				88824	29			88834		



NCR:	Yes	/ No		ř		WORK ORDER NON-		NFORM	MANCE / UPI	DATE		QA Closed:	Date	e:	9 j. sp.
Work Orde	or.	**** *********************************				DISPOSITION				AGAINST	DEI	PARTMENT	/PROCESS		
Part N	- - No.					Rework Scrap Use-as-is Work Order Update		Therm	Skid-tube  Machining  noforming  Large Fab	Crosstube Small Fab Finishing Composite			Water Jet d. Eng. Coor. re/Packaging Supplier		Engineering Quality Other
Root						ption of work order update		Initial		ion		Sign &			
Cause		Date	Step	Qty	(	or Non-conformance	Ch	nief Eng	Desci	ription		Date	Verification	4	QC Inspector
Doc/Data Equip/Tooling Operator Material Setup Other Process Supplier Training Unapproved															
			<del> </del>	1	l	F	AUL	T CATE	GORY			<u> </u>			i #
Landi	ng G	ear				General									
		Cracks Crushed/ Cuffs Heat Trea nspectio Ripples ir Forque W	n Strip in Bend Javes in E	Tube Extrusio		Bend BOM/Route Broken/Damaged Burrs Contamination Countersink Cut Too Short Drill Holes Drawing		Instruct Mainte Mislabe Misread Offset Out of 0	ion Incomplete ions Incomplete/ enance eled d	Jnclear		Ovalized Over/Under Part Incorre Part Lost/M Part Moved Positioned V	ct issing Vrong		Pressure/Forced Temperature/Cure Weld Wrong Stock Pulled Other
	ı i	rurning S	equence		1	Finish	1	TOUT OF 3	Sequence						

Outside Dimensions

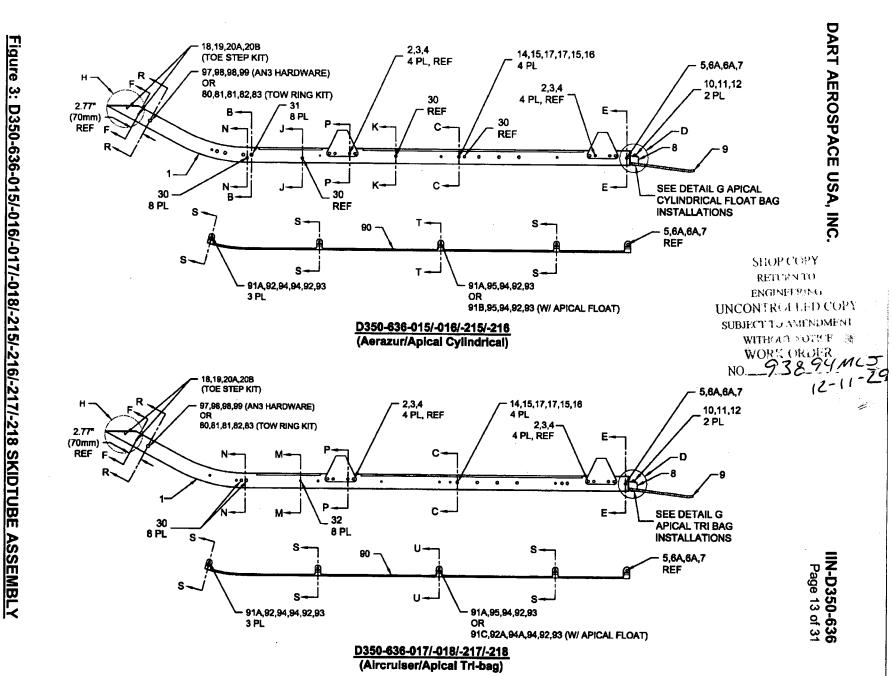
DQA: \_\_

Date:

Wave/Twist in Tube

Folio

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Date: 10.10.25

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L			X		D4168-043	350 SKIDTUBE ASSEMBLY, LH
L				X	D4168-044	350 SKIDTUBE ASSEMBLY, RH
L			<u> </u>			
L	1	1	1 1	1	D2739	WEB
L	8	8	- 8	8	D2743	SPACER
L	1	1	1	1	D2744	CAP
L	8	8	8	8	D2745	BUSHING
L	1		1	_	D3488-041	BLADE FITTING, LH
L		1		1	D3488-042	BLADE FITTING, RH
L	4	4	4	4	D3490-1	SPACER
L	4	4			D3490-3	SPACER
			4	4	D3490-5	SPACER
L	8	8	8	8	D3492-041	PLUG ASSEMBLY
	8	8			D3492-043	PLUG ASSEMBLY
L			- 8	8	D3492-045	PLUG ASSEMBLY
Е	8	8	8	8	D3631-1	WASHER
Е	7	7	7	7	D3873-1	BUSHING
Г	1	1	1	1	D4154-041	WEARPLATE ASSEMBLY
L	1				D4168-1	SKIDTUBE WELDMENT, LH
L		1			D4168-2	SKIDTUBE WELDMENT, RH
			. 1		D4168-3	SKIDTUBE WELDMENT, LH
L				. 1	D4168-4	SKIDTUBE WELDMENT, RH
L	4	4	4	4	D4170-1	SPACER
L	1	1	1	1	D4171-1	BUSHING
L						
L	4	4	4	4	ALS4-1032-225	INSERT
L	4	4	4	4	AN3C6A	BOLT
L	1	1	1	1	AN3C34A	BOLT
L	4	4	4	4	AN3C36A	BOLT
L	4	4	4	4	AN6C44A	BOLT
L	1	1	1	1	AN8C35A	BOLT
L	9	9	9	9	AN960C10	WASHER (OR NAS1149CO363R)
Ŀ	-4	4	4	4	AN960C10L	WASHER (OR NAS1149CO332R)
L	1	1	1	_ 1	AN960C816L	WASHER (OR NAS1149CO832R)
L	5	5	5	5	MS21043-3	NUT
L	4	4	4	4	MS21043-6	NUT
L	1	1	_ 1	1	MS21083C8	NUT
	4	4	4	4	NAS1515H3L	WASHER

#### GENERAL NOTES:

MATERIAL: MAKE D4168-1/-2/-3/-4 FROM D2600-3 EXTRUSION (INITIAL LENGTH = 120.0). FINISH:

DESCRIPTION

350 SKIDTUBE ASSEMBLY, LH

350 SKIDTUBE ASSEMBLY, RH

QTY QTY QTY QTY -041 -042 -043 -044 PART NUMBER

D4168-041

D4168-042

MATERIAL: MARC D4 106-17-27-31-4 FROM D280U-3 EXTRUSION (INITIAL LENGTH = 120.0).

FINISH:

CHEMICAL CONVERSION COAT PER DART QSI 005 4.1 PRIOR TO INSTALLING D2739 WEB.
POWDER COAT WHITE (REF. 4.3.5.1) PER DART QSI 005 4.3

BLACK ANTI-SKID PAINT AS INDICATED TO 1.0 ABOVE SKIDTUBE CENTER-LINE PER DART 005 4.4 (OPTIONAL).

TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED

UNITS: INCHES UNLESS OTHERWISE NOTED

BREAK SHARP EDGES: N/A

IDENTIFICATION: N/A

WEIGHT: D4168-041/-042/-043/-044 = 32.3 LBS

WELD PER DART QSI 004

FINAL CONFIGURATION SHOULD HAVE THE FOLLOWING MINIMUM MECHANICAL PROPERTIES:

MINIMUM YIELD TENSILE STRENGTH = 35 KSI

MINIMUM YIELD TENSILE STRENGTH = 38 KSI

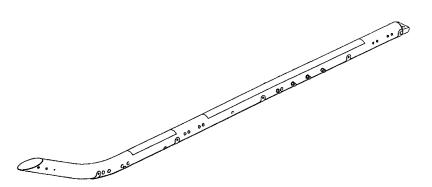
COAT ALL EXPOSED FASTENERS WITH LPS LABORATORIES "LPS PROCYON" AFTER FINAL ASSEMBLY, CLEAN EXCESS OFF POWDER COATING WITH MEN DEGREASER.

SPACER AND PLUG INSTALLED SAME AS SECTION AP-AP EXCEPT HORIZONTAL

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REV.			DESCRIPTION	BY	DATE
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CHECK	ED	W	DRAWING NO.		REV. A
MFG. A	PPR.	1	D4168 .	;	SHEET 1 OF 11
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D4168-041 350 SKIDTUBE ASSEMBLY, LH

D4168-042 350 SKIDTUBE ASSEMBLY, RH



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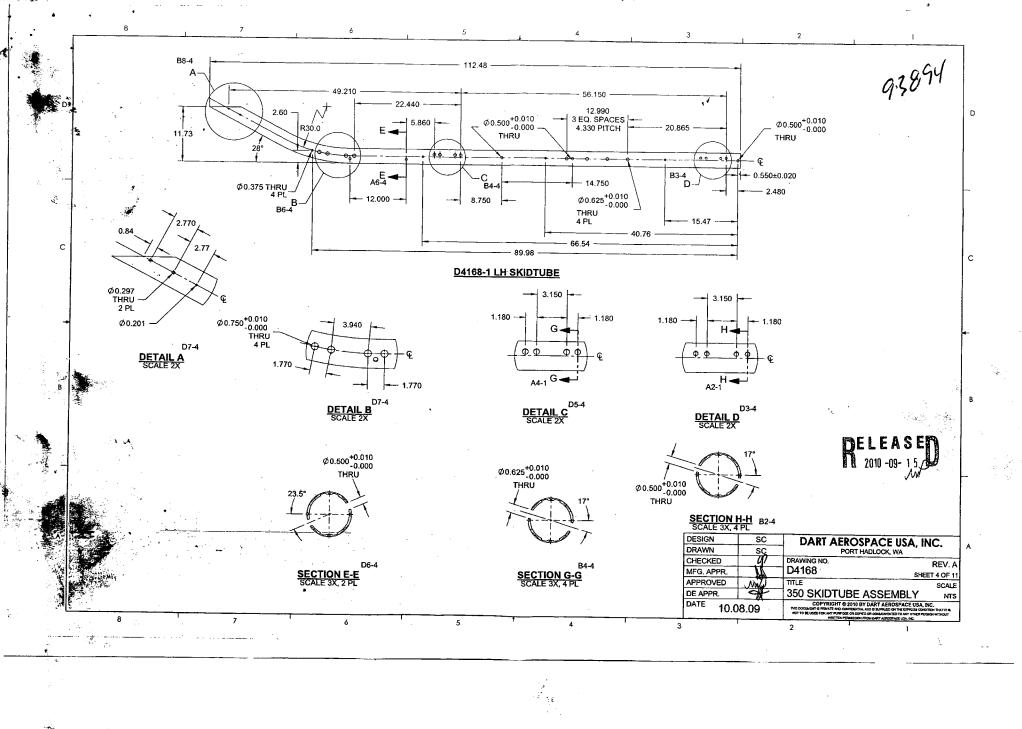
D4168-043 350 SKIDTUBE ASSEMBLY, LH

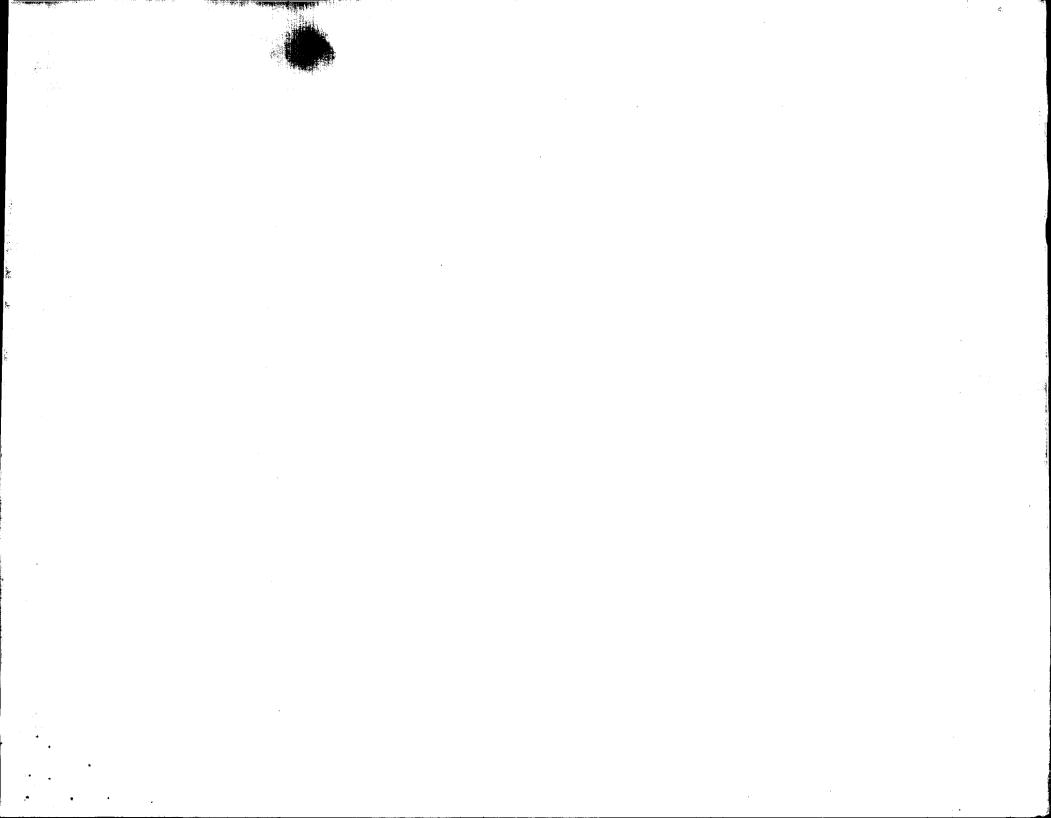
D4168-044 350 SKIDTUBE ASSEMBLY, RH

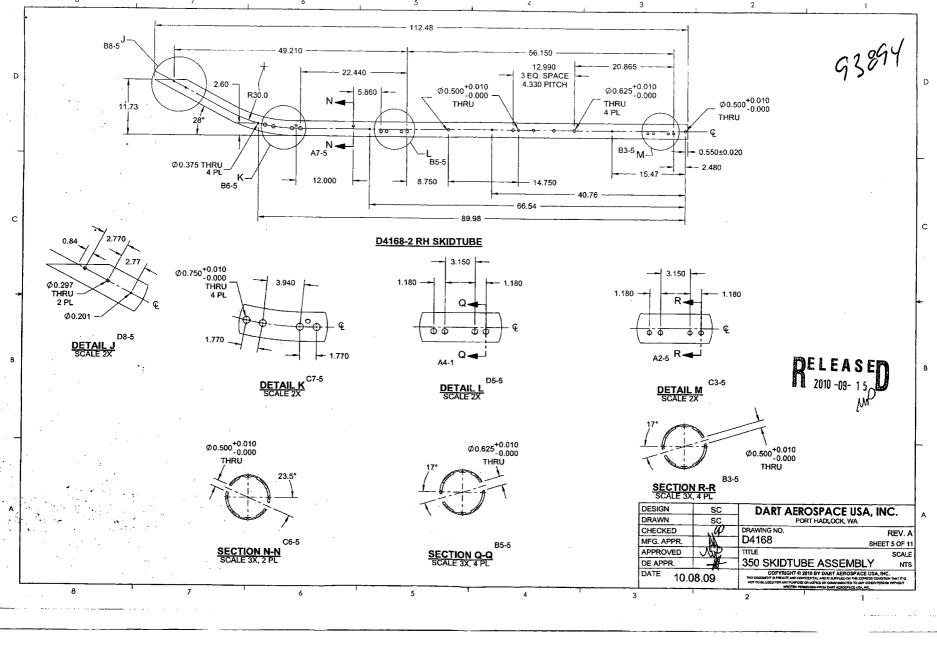
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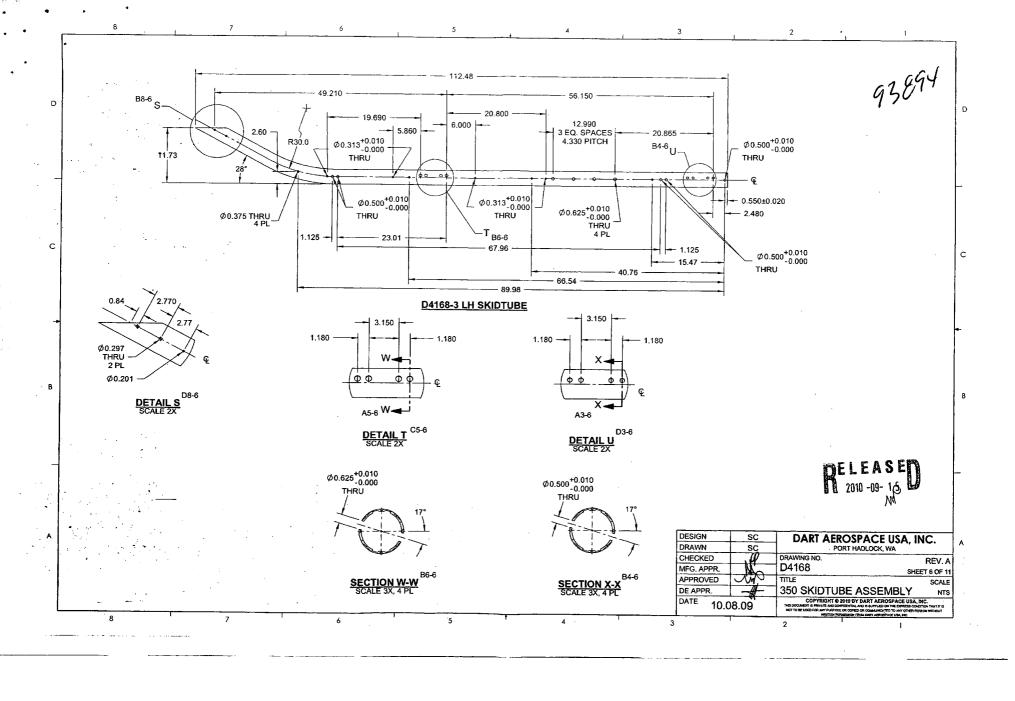
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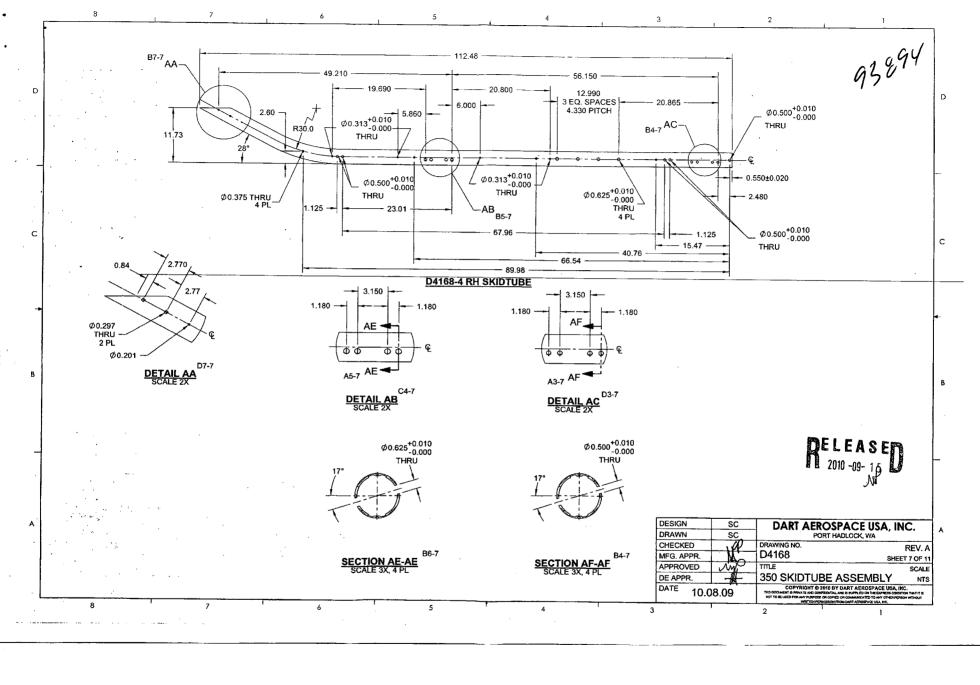


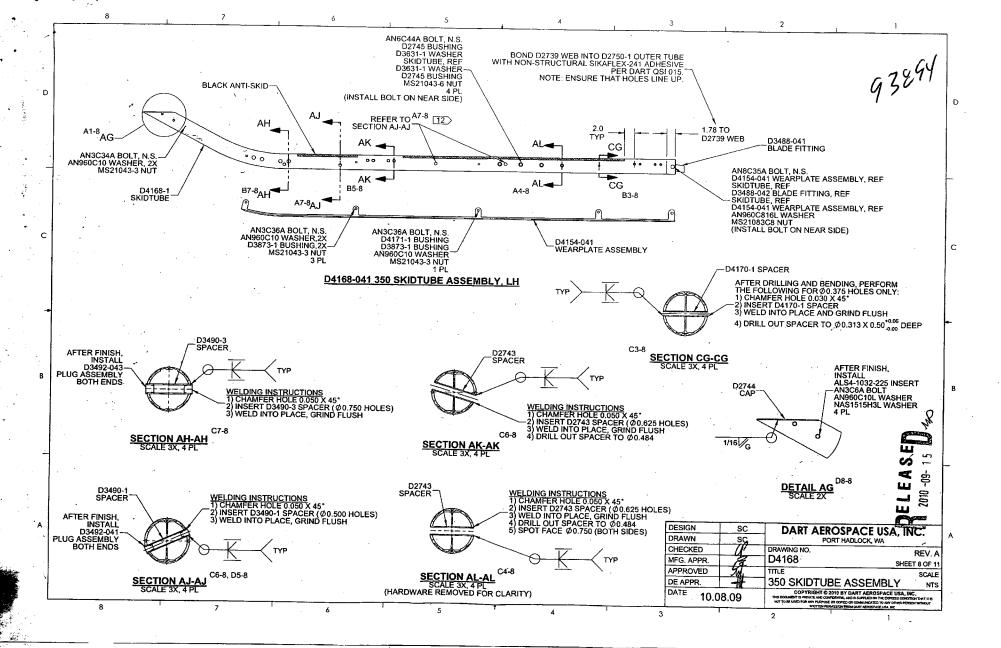


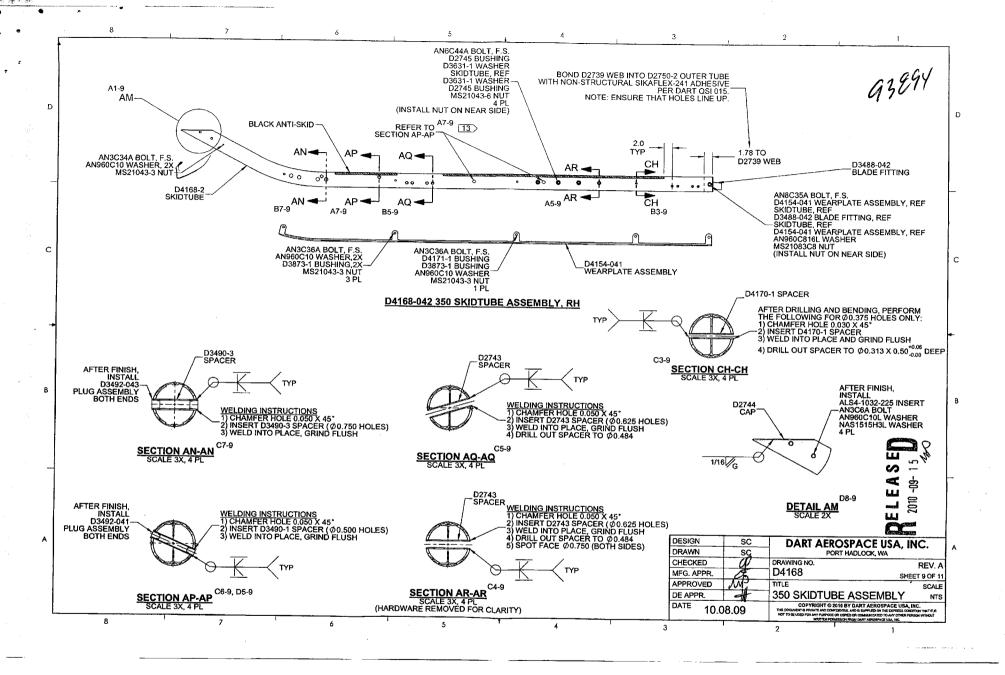


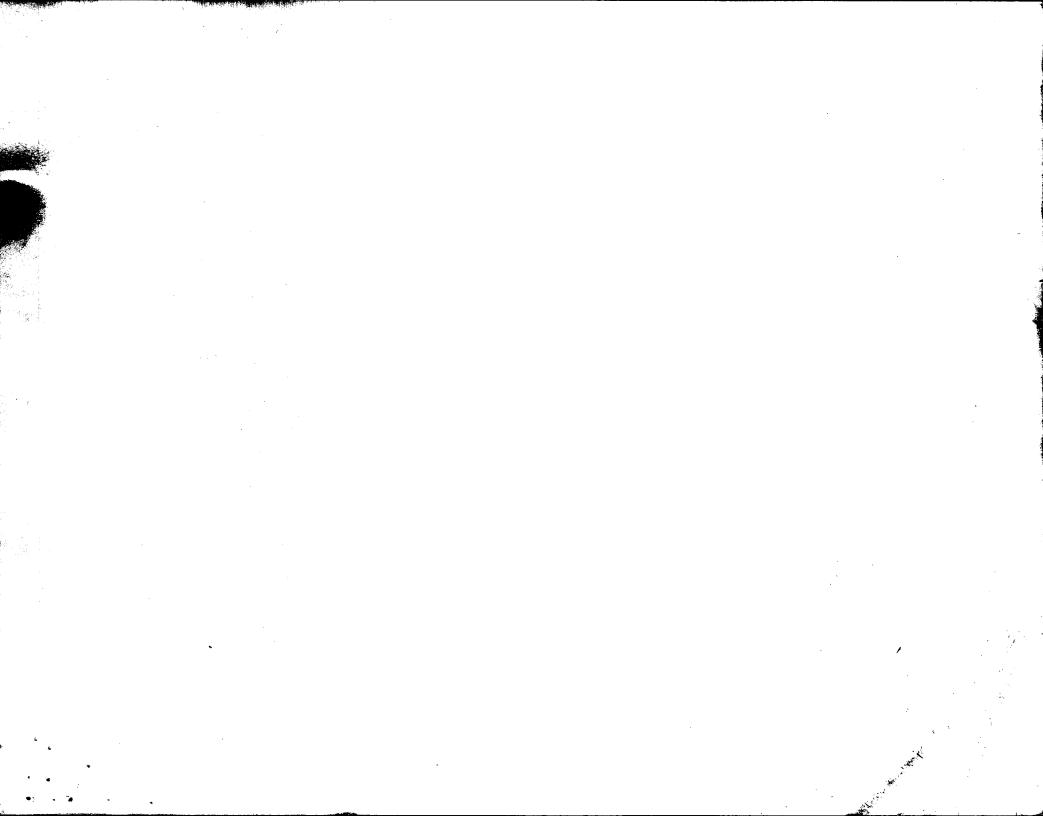
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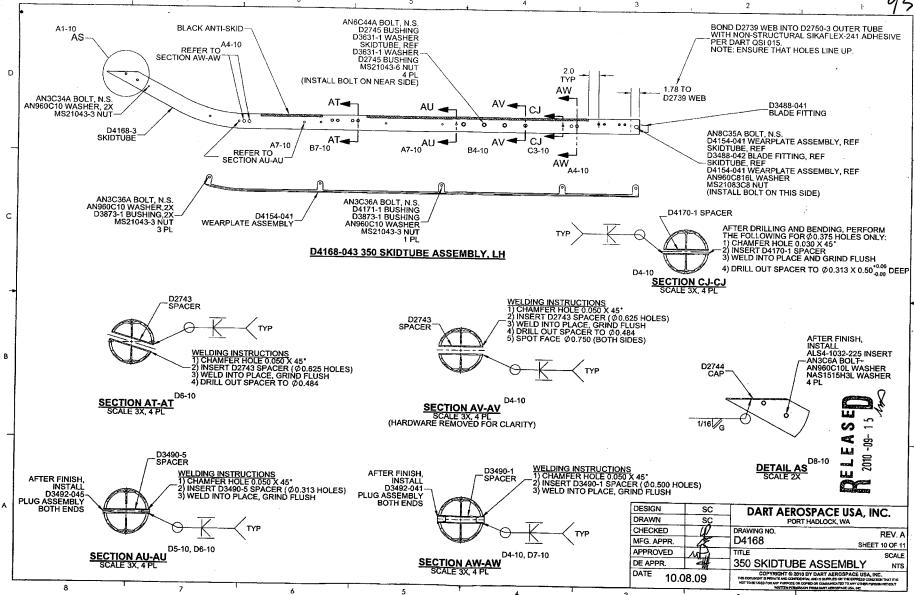












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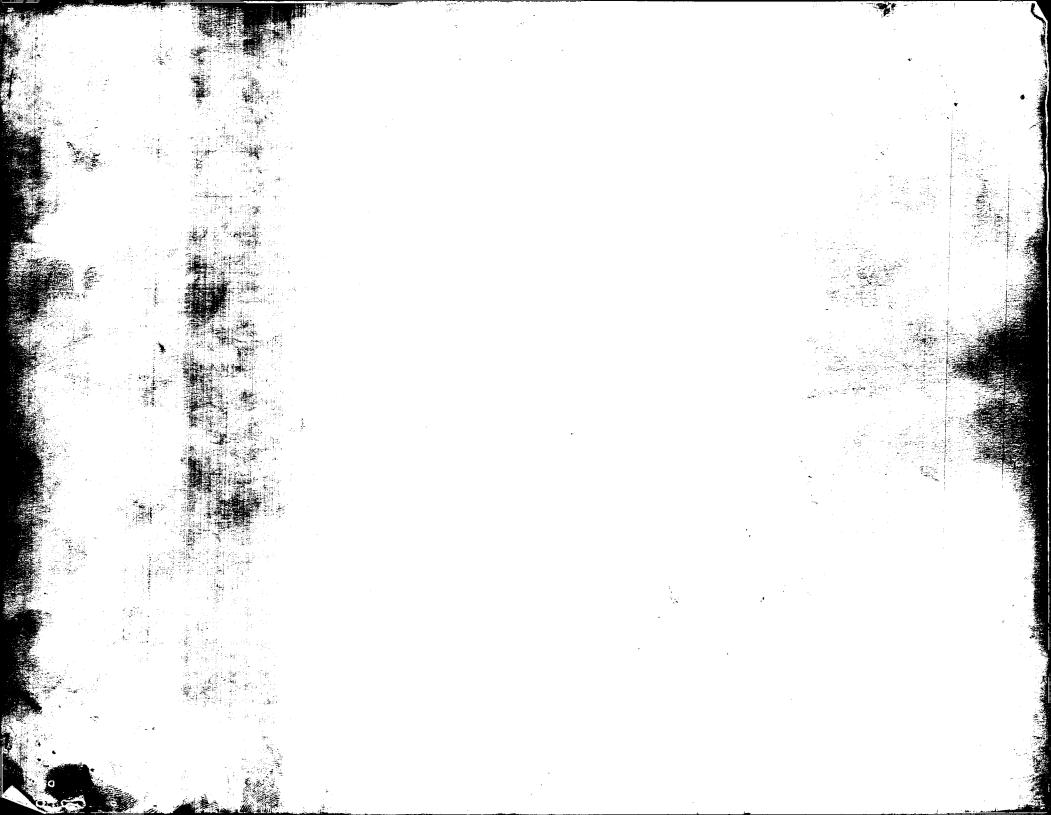
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SCALE 3X, 4 PL

DE APPR. DATE 10.08.09

350 SKIDTUBE ASSEMBLY

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NO. 309

# AWS D17.1.2001 QUALIFICATION TEST RECORD

Name: Barclay Elliott	
Job #: 93029 /	.,
Part #: \( \lambda 350 - 636 - \( 0/2 \)	,
Description: Skidtube	
Welding Process: Tig[ / Mig[ ]	
Base materiel: <u>Alum</u>	
Current: AC[ DC[ ]	

## **TEST REQUIREMENTS AND RESULTS**

Visual:	pass[4]	fail[ ]
Incomplete Penetration:	pass[ ]	fail[]
Incomplete Fusion:	pass[4	fail
Cracks:	pass[]	fail[ ]
Overlap (cold lap)	pass[]	fail[ ]
Undercut:	pass[]	fail[ ]
Pin holes:	pass[]	fail[ ]
Porosity (surface):	pass[]	fail[]
Coloration:	pass[1]	fail[ ]
Burn through:	pass[]	fail
-		

Qualifier Date of Test Coupon 12.12.12

Welder Borola Uliot Date of Test Coupon 12-12-12

The above named individual is qualified in accordance with AWS D17.1.2001 to weld

## REFERENCE ONLY

52

DART AEROSPACE USA, INC.

IIN-D350-636 Page 30 of 31

(CONTINUED FROM PREVIOUS PAGE)

Item	Qty 015	Qty -016	Qty -017	Qty -018	Qty -047	Part Number	Description
***43	-2	2	<b>2</b>	2		D3493-1	- WASHER
*90	1	1	1	1	1	D4154-041	WEARPLATE ASSEMBLY
*91A	4	4	4	4	4	AN3C36A	BOLT <sup>1</sup>
91B	4	<b>184</b>		ma1 mm	1	AN3C37A	BOLT TO SERVICE SERVIC
91C	47-		1	1	1	AN3C42A	-BOLT
*92	7	7	7	7	8	AN960C10	WASHER (OR NAS1149CO363R)
92A	1	<u> </u>	1	1		AN960C10	WASHER (OR NAS1149CO363R)3
*93	4	4	4	4	4	MS21043-3	NUT
*94	7	7	7	7	8	D3873-1	BUSHING
94A	<del>                                     </del>		1	1		D3873-1	BUSHING <sup>3</sup>
*95	1	1	1	1	1	D4171-1	BUSHING <sup>4</sup>
96				<u>t</u>	4	D4170-3	SPACER
				<del> </del>	<del>                                     </del>	AN3C34A	BOLT
*97	1 - 1 -	1 2	2	1 2	1 2	AN960C10	WASHER (OR NAS1149CO363R)
*98	2	+ 4 -	1 2	+ +	1	MS21043-3	NUT

- \* PART OF D4168-041/-042/-043/-044
- \*\* TO BE SUPPLIED BY CUSTOMER
- \*\*\* ONLY INSTALLED IF INSTALLING AN APICAL FLOAT SYSTEM

Revision: I

Date: 10.10.25

<sup>1</sup> QTY USED MAY BE LESS ON SKIDTUBES WITH APICAL CYLINDRICAL OR TRI-BAG FLOATS

<sup>2</sup> HARDWARE USED ON THE SKIDTUBES INSTALLED WITH APICAL CYLINDRICAL BAG FLOATS

<sup>3</sup> HARDWARE USED ON THE SKIDTUBES INSTALLED WITH APICAL TRI-BAG FLOATS

<sup>4</sup> HARDWARE NOT USED ON THE SKIDTUBES INSTALLED WITH APICAL TRI-BAG FLOATS

### **PARTS LIST** 8.0 (D350-636-015/-016/-017/-018/-047 KITS)

Item	Qty (-015)	Qty -016	Qty -017	Qty -018	Qty -047	Part Number	Description
	X			,		D350-636-015	SKIDTUBE INSTALLATION, LH, STD AERAZUR/APICAL CYLINDRICAL FLOAT COMPATIBLE W/ TRAINING WEARPLATE
·		x				D350-636-016	SKIDTUBE INSTALLATION, RH, STD AERAZUR/APICAL CYLINDRICAL FLOAT COMPATIBLE W/ TRAINING WEARPLATE
			x			D350-636-017	SKIDTUBE INSTALLATION, LH AIRCRUISER/ APICAL TRI-BAG FLOAT COMPATIBLE W/ TRAINING WEARPLATE
				х		D350-636-018	SKIDTUBE INSTALLATION, RH AIRCRUISER/ APICAL TRI-BAG FLOAT COMPATIBLE W/ TRAINING WEARPLATE
					X	D350-636-047	TRAINING WEARPLATE KIT (LH/RH)
<b></b>							
1	1					D4168-041	SKIDTUBE ASSEMBLY, LH
1		1				D4168-042	SKIDTUBE ASSEMBLY, RH
1			1			D4168-043	SKIDTUBE ASSEMBLY, LH
1				1		D4168-044	SKIDTUBE ASSEMBLY, RH
*1	1					D4168-1	SKIDTUBE WELDMENT, LH
*1		1				D4168-2	SKIDTUBE WELDMENT, RH
*1	<b></b>	<del>'</del>	1			D4168-3	SKIDTUBE WELDMENT, LH
*1				1		D4168-4	SKIDTUBE WELDMENT, RH
**2	8	8	8	8		350A41-1027-20	SCREW
**3	8	8	8	8		23119AG120LE	WASHER
**4	8	8	8	8		22541N120	NUT
<del>                                     </del>	-						
*5	1	1	1	1		AN8C35A	BOLT
*6A	1	1	1	1		AN960C816L	WASHER (OR NAS1149CO832R)
*7	-1-		=1=	==1==		=MS21083G8	NUT
*8	1		1		_	D3488-041	BLADE FITTING, LH
*8	<del>'-</del> -	1		1		D3488-042	BLADE FITTING, RH
9	<u> </u>					-D2741	FBLADE
10	-2=	-2-	===			=AN8C21A	=BOLT
11	==	2-2-	7-2-	====		AN960JD816	=WASHER=(OR-NAS1149CO863J)===
12	=2=	=2=	=2=	2		MS21083C8====	ENUT
- '-							
*14	4	4	4	4		AN6C44A	BOLT
*15	8	8	8	8		D2745	BUSHING
*16	4	4	4	4		MS21043-6	NUT
*17	8	8	8	8		D3631-1	WASHER
*18	4	4	4	4		ALS4-1032-225	INSERT
*19	4	4	4	4		AN3C6A	BOLT
*20A	4	4	4	4		AN960C10L	WASHER (OR NAS1149CO332R)
*20B	4	4	4	4		NAS1515H3L	WASHER
*30	8	8	8	8		D3492-041	PLUG ASSEMBLY
*31	8	8	- <u>`</u> -	t 👅	<u> </u>	D3492-043	PLUG ASSEMBLY
*32	<del>                                     </del>	<del>  °</del> -	8	8	<del> </del>	D3492-045	PLUG ASSEMBLY
32	1		<u> </u>	<u> </u>		NITINUED ON NEVT	

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